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FOURTH NURSING RESEARCH CONFERENCE

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AMERICAN NURSES' ASSOCIATION
NEW YORK, NEW YORK
MARCH 4 — 6, 1968

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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FOURTH
NURSING RESEARCH CONFERENCE

Shirley J. Gordon, M.S., R.N. Principal Investigator
Lucille E. Notter, Ed.D., R.N. Project Director

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FOREWORD

The fourth ANA Nursing Research Conference, which is reported herein, was held in New York City, March 4-6, 1968. The three-day conference was devoted to the presentation and critique of studies based primarily on the behavioral sciences. As with the three previous conferences, it was funded by a grant from the Division of Nursing, Public Health Service, U.S. Department of Health, Education, and Welfare.

The purpose of the conference was to provide a forum where nurse researchers could engage in a mutual exchange of their work and in critical examination of selected studies. Nurse researchers were invited to submit abstracts of their work for consideration at the conference. As a result, 26 abstracts were received, seven Master's project reports, 13 doctoral dissertation abstracts, two postdoctoral projects, and four projects conducted under other types of auspices. The six projects which were selected for presentation represented a variety of research methodologies, for example, the field work approach, the historical method, and the use of matched samples.

In addition to the research papers and critiques, informal special interest forums were arranged on the following topics: patient-care studies; studies of attitudes and values; role theory studies; cross-cultural studies; development of criterion measures; and studies of interaction process. Interest in the forums was evidenced by the fact that participants recommended that these be continued at future conferences and that they be more formally structured.

There were 69 in attendance at the conference - 40 invited participants, six speakers, six members of the advisory committee, and 17 representatives of governmental agencies and other national groups. The 40 invited participants were selected on the basis of the following criteria: 1) nurses recently or currently engaged in research as principal investigator, coprincipal investigator, or collaborator in a multidisciplinary project; and 2) nurse faculty of graduate programs within which there was a faculty research training and development program or a nurse-scientist training program. Invitees included both new and experienced researchers, prepared in nursing and other disciplines; two doctoral candidates; and two non-nurse researchers, a psychologist and a sociologist, who have participated in various studies related to nursing. The participants represented the following institutions and associations: Adelphi University, Boston College, Boston University, University of California (Los Angeles and San Francisco), Case Western Reserve University, Catholic University of America, University of Colorado, Columbia University, De Paul University, Detroit Visiting Nurse Association, Duke University, Emory University, The Health and Hospital Planning Council of Southern New York, Johns Hopkins University, University of Kansas, Loma Linda University, and Medical College of Virginia. Also, Mt. Sinai Hospital (New York City), Naval Medical Research Institute, University of Nevada, New York University, Ohio State University, University of

Texas, University of Utah, University of Washington, Wayne State University, Yale Psychiatric Institute, and Yale University.

The ANA Committee on Research and Studies continues to serve as the Advisory Committee to the conference series. This committee establishes the criteria for selection of papers to be presented and for the selection of participants.

This report presents the research papers and critiques given at the conference. Also included are summaries of the general discussion following each presentation, together with a commentary on the conference as a whole by Dr. Martha Pitel, a member of the advisory committee.

We wish to express sincere appreciation to the Division of Nursing, Public Health Service, U.S. Department of Health, Education, and Welfare, for its encouragement and financial support of the conference. We also wish to thank the various staff of the American Nurses' Association who helped to assure the success of this conference.

Lucille E. Notter, R.N., Ed.D.
Project Director

Shirley J. Gordon, R.N., M.S.
Principal Investigator

CONFERENCE GREETINGS

Jo Eleanor Elliott

It is my pleasure as President of the American Nurses' Association to bring you greetings on behalf of the members, the board of directors, and staff. Your participation in this fourth ANA Nursing Research Conference is part of a continuing and, indeed, increasing interest and effort in nursing research by the Association which began--and some of you may remember--when literally the hat was passed at the 1950 ANA convention for beginning funds to support nursing research. This culminated in the American Nurses' Foundation, the present research arm of the ANA.

In 1958, the House of Delegates adopted the first specified goal for the association. Goal One, as adopted, is "to stimulate efforts by nurses and other specialists, to identify and enlarge the scientific principles upon which nursing rests, and to encourage research by them in the application of these principles to nursing practice." The ANA Committee on Research and Studies has worked in various ways to assist the association toward this goal--your attending this conference is part of that effort. I express the ANA's appreciation for your being here, and appreciation to the Division of Nursing, U.S. Public Health Service for the financial support to make this gathering possible.

This particular kind of conference on nursing research could not have been held ten years ago. Recently several nurse researchers were noting the remarkable changes in the past ten-year period. Research conferences held ten years ago were for the purpose of helping faculty members do better in assisting master's students with their theses, of looking at the tentative and tenuous beginnings of nurses' research, and of looking at patient care areas which held potential for research.

All of you know some of the forces and occurrences in these past years which have helped us arrive at this conference today--the foresight and resulting "push" for preparation of faculty by many deans of collegiate schools, and by our colleagues in other disciplines, as well as the encouragement and stimulation by nurse colleagues, such as Faye Abdellah and, preceding her, Ellwynne Vreeland in key roles in the Public Health Service.

There has been the "pull" on many of us, also--the pull of needing more understanding, better basic underpinnings, further formal preparation.

There have been funds for research projects, for conferences such as this, for faculty research and development grants, for predoctoral fellowships, and for the nurse-scientist programs.

These forces, factors, and funds make possible the improved content, caliber, and communicability of results of research in nursing and/or research undertaken by nurses. They also make possible the presentation by some of you of your work for critique by your peers. A special word of appreciation to you presenters--public scrutiny and reaction is indeed for the courageous! But continuing improvement of your own research and that in the field can be more rapid by just such scrutiny and reaction.

I wish you a productive and intellectually stimulating three days ahead.

* * *

BECOMING WELL: A STUDY OF ROLE CHANGE

Betty Jo Hadley

In this study of role change, an attempt was made to explore the pre and postoperative interactional circumstances under which children who had corrective operations for congenital heart disease tended to retain or relinquish the sick role after they had been made anatomically and physiologically well. That is, I was interested in what factors other than the achievement of a surgical cure for the disease seemed to facilitate or inhibit the children in identifying themselves and behaving as well children. I thought that knowledge of these crucial factors could eventually be useful in helping children to give up the sick role in keeping with their change in medical status.

Secondly, I was interested in supporting my hunch that giving up the sick role (i.e., discontinuing the identity of oneself as sick and the behavior of the sick) must somehow be related to the purposes the sick role had served the child prior to his being made well. The source of my hunch derived from clinical observations of myself and other nurses who had cared for these children as well as those of physicians and social workers (1, 2). My hunch was further validated by a study conducted by Dr. Landtman and his associates in Finland. (3)

Although the term "sick role" became popular phraseology after the publication in 1951 of The Social System by Talcott Parsons and has been used from a Parsonian perspective by a number of investigators, I chose to elaborate on the notion of the sick role by bringing it within the interactionists' approach to the concept of role (4, 5). In this approach to the concept of role, status or position refers to a person's location in the system of interaction (in this instance to some position of illness or wellness); and role is viewed as a constellation of behaviors that emerge out of the interaction between self and other, that constitute a meaningful unit and that are the consistent expression of the sentiments, values, and/or goals that govern or provide direction for that interaction. Within this concept continuance in the performance of a given role requires validation, or to use Parson's term, legitimization by the relevant others in the interaction situation (5, 4).

This conception of role allows for viewing roles as being defined, created, stabilized, or modified as a consequence of interaction rather than defining them solely in terms of prescriptions for behavior when one is occupying a given status. It allows for viewing role change as a reflection of a changed assessment or perception of the role of the other in the situation. It permits an analysis of interaction patterns in terms of the goals, values, or sentiments that govern that interaction rather than just in terms of the degree to which the behavior of one person meets the expectations of another (5). In this study, I assumed that the parents (particularly mothers) would be the major significant others for the children, i.e. the major legitimizers or questioners of the role portrayals of the children.

Statement of Hypotheses

The general hypothesis that guided the conduct of the study was that different patterns of preoperative parent-child relationships will result in different processes by which a child relinquishes the sick role following a curative operation for congenital heart disease. Then, using the term sick role to refer to the child's preoperative patterns of behavior, I hypothesized that each of the kinds of patterns of preoperative parent-child relationships that I expected to find would result in observably different processes by which children from these patterns relinquished the sick role.

The specific hypotheses were that in the absence of other obvious handicapping illnesses, both physical and emotional, and given the achievement of a surgical cure for congenital heart disease:

1. A protective pattern of preoperative parent-child relationship will result in a child-initiated, parent-resisted, and delayed relinquishment of the sick role on the part of the child.

2. A rejective pattern of preoperative parent-child relationship will result in parent-initiated, child-resisted, and delayed relinquishment of the sick role on the part of the child.

3. An adaptive pattern of preoperative parent-child relationship will result in a jointly initiated relinquishment of the sick role on the part of the child within the period of time as expected according to his changed medical status.

Major Variables

The major variables were patterns of preoperative parent-child relationships and the processes of role change or of relinquishment of the sick role. The different patterns of preoperative parent-child relationships have been designated as protective (implying overprotective), rejective, and adaptive.

A protective pattern of parent-child relationship was designated as one in which the major sentiments and/or goals governing the interaction between the parent and the child focus on the maintenance of the child in a dependent state (of illness). It has been characterized by the parent restricting the child in his activities and associations to a greater extent than that warranted by his physical condition and by differential treatment of the handicapped child versus the non-handicapped sibling (when he exists). This differential treatment has been observed in relation to response to symptomatology, expectations regarding self-care and care of the environment, and punishment, which was not called for by differences in capacity of the children. It is also characterized by child expecting and allowing the parent to do for him things he could do for himself (child in need of care.)

A rejective pattern of parent-child relationship was designated as one in which the major sentiments and/or goals governing the interaction between the parent and the child tend to be separate, individual, and sometimes conflicting goals and sentiments. It has been characterized as a situation in which the child's sick role behavior, which may be interpreted as being focused on getting attention from the parent, is viewed by the parent as interfering with the achievement of his (her) own goals. It is one in which a non-handicapped sibling may be favored over the handicapped child, and/or the parent expects the child to make up for his physical incapacity by excelling in such things as school work, etc.

An adaptive pattern of parent-child relationship was defined as one in which the major goals and/or sentiments governing the interaction between the parent and the child are focused on the pragmatic outcome of the relationship. It has been characterized as one in which the goals and sentiments are reciprocally shared, the parent has realistic expectations of the child within the limits of his capacities and the child is allowed to develop at his own pace.

The dependent variable or the different processes by which relinquishment of the sick role was expected to take place was defined essentially in terms of whether or not the child's attempts to retain or relinquish the sick role postoperatively were reinforced or challenged by relevant others--in this case his parents. That is, on the assumption that role change or stability on the part of the child would be a function of the preoperative pattern of interaction between the child and mother, the child would have to receive validation from his mother of the retention or relinquishment or in some way come to terms with what appeared to him to be behavior inconsistent with the role he had assigned to his mother. Or, stated differently, the child's postoperative role performances would be designed on the basis of the assignment of a purpose or sentiment to his mother. And, if the mother's behavior was consistent with the assigned purposes or sentiment, child's verification of own roles would be achieved, if not, the child would be called up to revise his conception of his and his mother's roles in the interaction.

More specifically, the processes were defined in terms of four kinds of possible consequences of interaction between the child and his mother that were derived from the role notions just presented. Following cure of his congenital heart disease:

1. The child could continue to enact the sick role and have his performance validated by his mother.

2. The child could continue to enact the sick role and not have his performance validated by his mother.

3. The child could attempt to relinquish the sick role and have his performance validated by his mother.

4. The child could attempt to relinquish the sick role and not have his performance validated by his mother.

A discussion of the circumstances under which combinations of these situations were hypothesized to occur as a consequence of different parent-child relationships follows.

The child-initiated, parent-resisted and delayed relinquishment of the sick role, hypothesized to occur as a consequence of a protective preoperative relationship, was defined as a three-step process characterized by: 1) the child continues to enact the sick role postoperatively, and his performance is validated by his parent; 2) he then attempts to relinquish the sick role, and his performance is not validated by his parent; and 3) following this stage, the child gives up his performance of the sick role, and his performance is validated by his parent. This process was assumed to be "delayed" and problematic. The interactional circumstances that were inferred were that because the preoperative parent-child interaction had revolved around the sick child (i.e., the child portraying the sick role had been the major axis around which interaction rotated) initially both parent and child would tend to stabilize their relationship on this basis, but, as the child began to experience his new sense of well being or began to take account of others treating him as well, he would become more active and want to participate in activities from which he had previously been restricted. The mother would initially resist this more active child that had had to be so protected, but would eventually be called upon, as a consequence of the interaction, to re-assess her conceptions of the child's and her own role.

The parent-initiated, child-resisted, and delayed relinquishment of the sick role, hypothesized to occur as a consequence of a rejective preoperative relationship, was defined as a two-step process characterized first by the child continuing to enact the sick role and not having his performance validated by his parent, and secondly by the child's being called upon to relinquish the sick role with validation of his performance by his parent. The nature of the inferred interactional circumstances, here, was that the parent would welcome the physician's proclamation that the child was now "well," but that the child initially would be unwilling to give up a "role" that had served him so well in getting attention from his parent. In this case, it would be the child who would be called upon to revise his conceptions of the role of the parent and his own role. This was also expected to be a delayed and problematic process.

The jointly initiated relinquishment of the sick role as expected according to the child's changed medical status, and hypothesized to occur as a consequence of an adaptive preoperative relationship, was characterized as a process in which, as medically indicated, the child relinquishes the sick role and his performance is validated by his parent. In this instance, it was expected that the relinquishment of the sick role on the part of the child would be more a matter of the parent and child defining a new shared goal, i.e., that of the child getting better or "becoming well" than of the parent and child having to come to terms with one another.

Methodology

Sample. The sample of subjects was selected from those children scheduled for operation during the period of January 15, 1965, to April 15, 1965. The criteria for selection included three years of age or older, surgical cure of congenital heart disease anticipated, residence within 100 miles of Los Angeles and relatively low (i.e., not high) surgical risk.

Procedure. The names and addresses of the children scheduled for operation were obtained from the surgeon. The records of these children were reviewed to obtain some of the background data and medical information. The mother of the child was then called for an appointment "to discuss the possibility of" she and the child "participating in the study." As it happened, the contact made facilitated the first visit in the home being the preoperative interview.

Interviews were held with the child and the mother prior to admission to the hospital, at one month, and at three to four months following discharge. In addition, the child and the parent were visited and observed both preoperatively and postoperatively during hospitalization. The behavioral dimensions along which the interviews were conducted with the child and the mother were:

1. General description self and other
2. Extent of self-care responsibility
3. Care of environment responsibility--own, general home
4. Kinds of play activities alone and with others
5. Restrictions on play, by whom

6. Degree of association with others (outside of play activities)
7. Limitations activities and association
8. Circumstances of, and response to punishment
9. Response to symptoms
10. Expectations regarding change, self and other.

The purpose of postoperative interviews was to look for changes in self and other perceptions and in the behavior of the parent and the child. Also collected were information on various other factors, such as age, sex, school status, and type of congenital heart disease.

Findings

The major differentiating characteristics of the interview group are provided in Table 1. In relation to the characteristics not included in the table, all subjects were non-Catholic except one (Case No. 4), and one (Case No.3) was a Negro. Three children (Case Nos. 5, 6 and 8) had disturbed parent-child statuses, and the remainder of the children had both natural parents. Seven of the children were enrolled in regular school, and one child (Case No. 3) was enrolled in a school for handicapped children. Only one (Case No. 7) was an only child.

Although the interview sample was very small, the findings were most encouraging. In all cases, except one (Case No. 8), the results not only were in the hypothesized direction, but also

TABLE I

Major Differentiating Characteristics of the eight interview cases

Case No.	Age Years	Sex	Time in Sick Role	Degree Sick Role Behavior	Est. S.E.S.	Diagnosis	Parent-Child Relationship	Manner of Sick Role Relinquishment
1.	6	F	4 years	Moderate	Middle	Total Anomolous Pulmonary Venous Return	Adaptive	As Expected
2.	5	M	3 years	High	Upper	Ventricle Septum Defect	Protective	Other Delayed
3.	13	M	11 years	Moderate	Lower	Tetralogy of Fallot	Adaptive	As Expected
4.	11	M	9 years	High	Middle	Tetralogy of Fallot	Protective	Other Delayed (very)
5.	14	F	12 years	High	Lower	Tetralogy of Fallot*	Rejective	Self Delayed
6.	7	M	7 years	Low	Middle	Aortic Stenosis	Rejective	Self Delayed
7.	15	F	13 years	High	Middle	Tetralogy	Adaptive	As Expected
8.	14	M	12 years	High	Upper	Tetralogy of Fallot*	Protective	As Expected

*No previous palliative procedure.

BJH

the different processes by which the sick role was relinquished (or more specifically, by which the sick role was being relinquished) seemed to be occurring as a consequence of the kinds of postoperative interactional circumstances that were expected to result from the different patterns of preoperative parent-child relationships. By way of illustration and in support of the above statement, descriptions of the interactional circumstances under which a child's relinquishment of the sick role occurred as expected according to his changed medical status or was delayed following a successful corrective operation for congenital disease follow.

I. Protective

The Pre-operative Period. Of the eight parent-child pairs in the interview group, three were classified as protective, and two of the children were delayed in their relinquishment of the sick role. Although the behavioral manifestations of the three cases varied to some extent, the patterns of interaction between these parents and their children were similar in that they revolved around the child and his illness.

For example, both the five-year (Case No. 2) and the eleven-year-old (Case No. 4) boys had started school at age five and had been withdrawn by their parents because the children didn't like school and "it was too much for him." Also, the eleven-year-old had missed school frequently because of his heart and, as early as age three, had learned to use his heart to get out of such things as putting his toys away. The mother of this boy said she thought that she and her husband had "taught" him to do this by explaining their restrictions on him in terms of his heart condition. However, one child, (Case No. 8) who at the age of nine was reported to have been quite nervous and to have picked at his fingers to the point where he needed treatment by a dermatologist, apparently rebelled against the attempted restrictions and would keep going until he fainted on the school grounds. This child was not delayed in his relinquishment of the sick role.

Hospitalization. In the hospital it was observed that these children tended to be overly apprehensive about treatments, "finicky eaters," reluctant to move themselves in bed, reluctant to get out of bed, and uncooperative, particularly when their parents were not with them. For example, one child (Case No. 4) observed at the time a nurse was preparing to give him an injection, whimpered, "Wait, wait, I need somebody to hold onto."

In comparison to some of the other children observed in this investigation, these children complained of pain more frequently and for a longer duration while in the hospital and required more assistance with eating, bathing, walking, etc. All were in the hospital for one or more days longer than expected, but for medical reasons. One elven-year-old boy, however, didn't seem to be disturbed by the lengthened stay. When asked by the investigator about when he was to go home, he replied: "Oh, Wednesday, Thursday, or Saturday; they told me, but I don't remember." (Case No. 4)

The parents of these children seemed to be quite solicitous of their children during the period of hospitalization. One set of parents secured a private room for their five-year-old boy (Case No. 2) and, except when the child was in the intensive care unit, one of them stayed with him at all times while he was in the hospital. They also brought and hand-fed him food from home because he would not eat the hospital food.

At Home After Discharge. At the one month post-discharge interview, in the delayed cases, the patterns of parent-child relationships that had been observed preoperatively seemed to be continuing. The parents continued to restrict the child from activities and associations, etc; and, although the children were observably improved from a medical standpoint and desirous of being more active in some areas, there was little evidence that they were anxious to leave their mothers and return to school. The following verbal exchange between an eleven-year-old boy and his mother illustrates a mother's continued attempt to impose the sick role on the child, (i.e., not to validate the child's attempts at relinquishment of the sick role):

> (In response to the question by interviewer: Have you gone to the movies since you've been home?)
>
> Child: I never get to go to the show with the kids on Saturday. (His younger sister was allowed to do so.)
>
> Mother: Well, you've never been able to go.
>
> Child: I'm going to start. If I get the money, and I've got the bike (and Dr. F. says I can ride it), I'm going.
>
> Mother: Not without asking.

Child: Well, you won't let me go, if I ask ...

Int: Don't you think things will change around here?

Child: They haven't changed yet!!!!! (The child literally shouted this comment.)

Mother: Well, you aren't completely well yet either, are you?

Child: Yep.

Mother: How come you aren't back to school, yet, then?

Child: I'm well, but my bones aren't. (Apparently the doctor had explained to the mother and the child that the child's heart was healed, but that he should avoid rough and tumble play until the sternum--the chest bone that was incised for entry into the chest--was completely healed--at about three months.) Case No. 4)

This child was not anxious to return to school, however, because, as he explained: "When I do go back the kids will just tease me, and I want to be able to beat them up when I go back to school."

In addition, both of the delayed children had been kept in the house for the first three weeks after discharge from the hospital, whereas the third child in this group had returned to school within four weeks.

Four months after discharge from the hospital, the delayed children showed some evidence of beginning to relinquish the sick role. They were more active than before their operations, they played outside with other children more, and they seemed to be desirous of moving out from under the protective parental wing. In relation to school activities, however, one of these children did not return to school at all (Case No. 2), and the other

(Case No. 4) returned to school two months after discharge from the hospital and after having had a home teacher for six weeks. At this point in the recovery period, the mother of the five-year-old (Case No. 2) was beginning to take account of her child's change in behavior, while the mother of the eleven-year-old boy (Case No. 4) continued to try to restrain her child. The following interactional sequences observed during the second posthospitalization interview illustrate the former situation.

> (Preoperatively, the mother of this five-year-old boy with a ventricular septal defect had done practically everything for the child, including talk; and the child came to his mother for help with things like putting on his sweater and opening the door to go outside. At the time of the first postdischarge interview, the pattern of parent-child interaction was very similar.)
>
> The mother observed that the child's nose was running and told him to get a Kleenex and bring it to her so that she could blow his nose for him. The child went to the Kleenex box, took a Kleenex, looked at his mother, wiped his own nose, and threw the Kleenex in the waste basket. The mother said: "Here, let me do it." Then, after observing the boy's behavior, shrugged her shoulders.
>
> The mother left for a few minutes to go to the market. While she was gone, the child showed the interviewer all his new toys and explained how they worked. (Preoperatively, this child was interviewed by asking questions to which he could respond with "yes" or "no" answers.)
>
> When the mother returned, she put a box of cat food on the table and asked the boy if that was the kind he wanted her to get for their cat. He said, "yes", and started to open the box. The mother approached him and said: "Here, I'll open it for you." The child drew back and said: "No, I can do it," and proceeded to try to open the box. The mother paused for a moment then said: "O.K., I'll get you a spoon to poke the hole with." She then proceeded to help him open the box rather than do it for him. After the box was opened, the child asked his mother for a dish to mix the food in, and the mother made no gestures toward doing it for the child or even helping him.

The above interaction between parent and child was interpreted as being a prime example of a situation in which the child's behavior was inconsistent with the role imputed to him by the mother, and she was called upon to re-assess and modify her conceptions of her own and the child's role in the interaction. And, although this child's relinquishment of the sick role was delayed, it seemed likely that eventually the child would "give up his sick role behavior and have his performance validated by his mother."

In the case of the eleven-year-old boy, although he had made some attempts to relinquish the sick role, it was evident that the mother was continuing and would continue to restrict him. For example, by the time of the second posthospitalization visit, she had still not allowed him "to go to the show with the kids on Saturday." The child, however, proudly reported that he had won a fight with a "kid" who had teased him to a great extent prior to his operation. It seemed as if he were announcing to the "kid," to the investigator, and to his mother that he was no longer sick. It was expected, however, from the data at hand, that it would be a long time, if ever, before this boy's mother perceived and treated him as a well child.

In relation to the fourteen-year-old boy in this group (Case No. 8), who seemed to be relinquishing the sick role as expected, two alternative explanations could be offered. Either this parent-child pair were misclassified in the preoperative pattern of parent-child relationship; or the child's interaction with others influenced the manner in which he relinquished the sick role to a greater extent than that with his mother.

For several reasons, the latter alternative seemed most likely. From the standpoint of the boy's reported behavior, he may have interacted with his mother at home predominately in terms of the sick role, but, as may be recalled, his behavior at school was quite different. This seemingly conflicting behavior is explainable when one remembers that roles are learned in pairs or systems; and although an individual may not learn the role of the relevant other fully or correctly, it may serve him well when interacting with different kinds of relevant others (5). That is, "when a person learns such a pair or system of roles, which of them he enacts in a given situation will depend upon the way in which he assesses the role of relevant others in the situation." (5) (This may also explain why the other two boys in this category reportedly had much more difficulty at school and with playmates than did this young man.) Other factors may have been this child's age and sex. Data obtained from a review of the charts of sixty-one patients indicated that young protected boys tend to be delayed more frequently in relinquishing the sick role than do older protected boys and both older and young protected girls. Also this boy's "levels and directions of aspiration" were somewhat different than the eleven-year-old boy's (Case No. 4), for instance (5). While the latter wanted to do such things postoperatively as learn Judo so that he could get back at the boys who teased him, go "Go-Kart" riding, learn to swim, and go camping with his father, the former was more oriented toward eating to gain weight and weight lifting to build up his muscles so that he could play baseball and football.

Furthermore, in relation to the function of the self-conception that it "defines levels and directions of aspiration," one may speculate that the sick role had been incorporated into the self-conception of the eleven-year-old to a greater extent than it had into that of the fourteen-year-old (5). In any case, it seemed as if factors other than the preoperative pattern of the mother-child relationship were operating as influences on the manner in which this child relinquished the sick role.

II. Rejective

The Preoperative Period. Two (Case Nos. 5 and 6) of the eight parent-child pairs in the interview group were designated preoperatively as rejective, and both of these children were delayed in the manner in which they were relinquishing the sick role. Although this category turned out to be a rather sticky one (when it was adapted for use with chart data), the common identifying characteristic of these two pairs was that the goals governing the interaction between the parent and child seemed to be separate, individual, and sometimes conflicting ones. This was manifested primarily by an apparent lack of reciprocality in the sentiments assigned to self and other in interaction as reflected in the disparate self and other perceptions obtained on interview and differences between the sentiments expressed by and those reflected in the behavior of the mothers. For example, the mother of the fourteen-year-old girl (Case No. 5), in the course of describing her daugher (and her four nonhandicapped sons), during the preoperative interview, emphasized how much her daugher meant to her and how much fun the daugher (and the whole family) enjoyed going on family camping trips. She also reported to the interviewer that the girl liked school, attended regularly and did well. The child reported that she "hated" going on camping trips with the family and resented having to always "baby sit the boys" when her mother and father went out together. She also commented that she did not like school and that she did "O.K." when she studied but that she didn't "care much for that." She further indicated that she spent a great deal of time reading in her own room with the door closed. (She would tell her mother that she was tired and didn't feel like doing anything else.) In this same mother-child pair, the mother was found to have reported previously to the doctor that the girl had missed quite a bit of school, "often", according to the mother, "to get attention," and because she was "just lazy." (A similar comment was made to the interviewer in relation to return to school on the second posthospitalization interview.)

In general, the parents in this category tended to favor nonhandicapped siblings over the cardiac child, to be achievement oriented in relation to school, to emphasize their concern over the impending operation, to be somewhat inconsistent in relation to what they said and what they did, and to be quite willing to turn the care of their children over to someone else. For example, when the mother of the seven-year-old boy (Case No. 6) was contacted for the preoperative interview, she said that she was very willing to participate in the study and that her mother (the boy's grandmother) would be happy to give the information needed. It was also observed that on every occasion on which the investigator was in the home the mother would be taking the boy's nonhandicapped sister someplace and leaving the boy home with his grandparents. In this same case, the grandmother repeatedly emphasized that the boy was always treated normally, yet he was allowed to play outside only an hour at a time. In addition, he had to get his "homework" done before he could go outside to play.

The children in these parent-child pairs tended to use sick role behavior as a way of getting attention from their mothers, to seek approval from and/or antagonize their mothers, and to welcome any restrictions that were imposed. The boy, for example, although presumably unaware of his heart condition, was reported to cough only in the evenings after his mother had come home from work. (This inference was supported further in the postoperative interviews.) In addition, he was described by the grandmother as a "good boy" who always did what she told him and actually helped around the house more than did his nine-year-old sister. (This child was interviewed retrospectively for information about the preoperative situation because he had not been told about his heart condition and thought he was going to the hospital for "tests.") In describing his preoperative activities, this boy seemed quite proud of how well he was doing in school and the fact that he usually did the dishes and said that he frequently would rather watch TV than play outside. The fourteen-year-old girl, on the other hand, told how she delighted in getting her mother upset occasionally by dancing with her step-father in the living room. The point she made was that she and her step-father would start dancing and her mother would have to yell at them to stop. She also mentioned that the thing for which she received punishment was not paying attention to her mother.

Hospitalization. In the hospital these children were described as apathetic and listless by physicians (apparently without medical cause) and were sufficiently demanding to warrant comments in the nurses' notes. (These descriptions were corroborated by independent observations on the part of the investigator.) For example, on two occasions the girl was reported to have kept the night hurse "hopping" by first wanting one thing and then another. The nurse recorded that the patient would call and want the window in her room open, then five minutes later she would want it closed, and so on for a period of about two hours before she went to sleep. In addition, betweentimes, she would ask for drinks of water. (These incidences occurred in the last portion of the child's stay in the hospital.)

In comparison with the parents of the other children in the study, the mothers of these children were something less than attentive during the period of time their children were in the hospital. Both mothers were at the hospital during the week in which the operation took place, but the mother of the boy returned home (about 60 miles away) and to work on about the third postoperative day, leaving the grandmother to stay with the child, and did not return until she came to discharge the child. The girl's mother stayed in town the day of the operation and for the first day afterward and then came to see her daughter on Saturday or Sunday during her twenty-day hospital stay, which was extended for medical reasons. This mother explained to the investigator that she had to be at home to take care of her husband (who was unemployed at the time) and her four boys. (Most parents of children who are hospitalized for heart operations tend to make arrangements to be close to the hospital during the period of the child's hospitalization. Although the distance that the family lives from the hospital and the cost of staying away from home may be considered as factors influencing the continued presence of the parents, the Social Service Department was usually able to make available inexpensive (and sometimes free) accomodations for parents from out of town who wanted to stay with their children.)

At Home After Discharge. Because of the unique character of the posthospitalization courses of these two children, particularly that of the boy, the descriptions of their convalescent periods have been presented separately as a way of illustrating a parent-encouraged, child-resisted pattern of relinquishing the sick role.

In relation to the fourteen-year-old girl (Case No. 5), similar kinds of contradictory statements were found in the mother and child posthospitalization interviews and within the mother's interview as were observed in the preoperative interviews. On the first posthospitalization interview (one month after discharge) the girl was found baby sitting with her brothers on a Saturday morning while the parents had "gone to town." (Because the investigator was unaware that this family had acquired a telephone, no appointment had been made for this interview.) The girl reported that she had spent the first day home in bed, since that time she had been up and around, and by this time had started helping with the dishes. (Because the parents were not at home, the interviewer stayed only a few minutes; therefore, little information was obtained at that time.)

On the second posthospitalization visit (about four months after discharge), the mother reported that the girl had been in bed for the first week after she came home and was now becoming much more active; but she said that the girl was not playing outside as much as she should. In the same interview, the mother explained that her daugher was continuing to do her own washing and ironing (apparently she returned to this activity about one month after she came home) even though the mother tried to keep her from doing so; then, a little later she said she had had to bawl the girl out for not straightening up the bathroom when she told her to do so -- "I really think she's just lazy." (The mother referred to her child's laziness two or three times during the interview.) The girl had returned to school two months following her discharge from the hospital without having had a home teacher. (As far as could be discerned, arrangements had not been made by the hospital for a home teacher. Also the family had moved during this period, and apparently the child returned to school as soon as it was permitted by the doctor.) In addition, it would appear from the information obtained that this girl was continuing to play her step-father against her mother. For example, several references were made by the mother that the girl could "wrap her Daddy around her little finger" and would use this as a way of getting out of things, like straightening the bathroom, as well as getting to do things, like being taken to town on Saturdays, that were contrary to her mother's desires. That is, she would tell her step-father that she was tired and didn't feel like doing a certain thing, and he would help her get out of it.

The seven-year-old boy who had had an operation for Aortic Stenosis (one of the more simple open-heart operations) was seen three times after he had been discharged from the hospital: the first visit was on his first day home from the hospital for purposes of interviewing him retrospectively regarding his perception of the preoperative situation; the second visit was about one month later; and the third, about three months after he had come home from the hospital. An attempt has been made in the following descriptions of behavior and interaction to show the ways in which the mother, although she restricted the child (frequently to a greater extent than was warranted by his medical status) in some of his activities and associations, continued to reject the "sick" child and encouraged a conception of him as well, and how the boy used sick role behavior to get attention from his mother.

When the mother was contacted for an appointment for the first interview, the investigator raised a question as to whether the child should be disturbed on his first day home after the long ride from the hospital. The mother responded: "Oh, he's all right; he'll probably be glad to see you; we aren't letting anyone else come in to see him, you know." When the interviewer arrived, it was noticed that a bed had been placed in the living room for the child; and the child seemed to be enjoying the special attention he was getting. During the course of the interview, it was learned that the mother had gone to the hospital to take care of the discharge procedure, but that the child had ridden home from the hospital with his grandmother while the mother was accompanied on the trip, to and from the hospital by her daugher because, according to the mother, she thought it would not be good for the boy to have the two children ride home in the same car. The mother had already arranged for a home teacher who was to come the next week and had had his sister bring home his books from school with an assignment from the teacher. In addition, the mother left accompanied by her daugher before the interview with the boy was completed, but before she left, she had the boy lift up his pajama top so "you can see how well the incision is healing."

On the second visit, the boy was found in the bed in the living room, where he had apparently spent most of his time since he had been home. Both the mother and the child reported that he had been outside very little, but that he was keeping up with his school work quite well; in fact, he had been able to progress further than his class at school in some subjects. One of the first things the mother did was to have the boy show the investigator the marks he had received on his school work. During the interview, the mother frequently coached the boy's answers to questions, and the boy was observed to pause and look at his mother before answering most questions. When the mother lifted the boy's shirt to show the interviewer "how well the stitches had healed," the child yanked the shirt from his mother's hand, and pulling it down, literally yelled at her, "Scar, scar, not stitches!" One could not help but get the impression that there was a great deal of antagonism between these two, yet the child constantly seemed to be seeking approval from his mother, as will be seen in the description of what happened on the third visit.

Furthermore, with the emphasis that the child placed on the word "scar," one cannot help but wonder about the impact on this boy's self-conception of having gone to the hospital for "tests" and waking up from anesthesia and finding that a relatively long (scar-producing) incision had been made into his chest. Another element of interest here is that, although the boy was told he was going to the hospital for tests, he was told by the mother that he would be "well" when he came home. (It may be recalled that this child supposedly did not know about his heart condition preoperatively. Yet it was learned somewhat casually from the mother of another patient in the same town that "everyone" at school, including the other children, knew about the "little boy who was going to have an operation at the same hospital where my daugher is going.")

On the third visit the following events took place:

> (Although an appointment had been made, the family forgot that the investigator was to come at a specified time. The mother and the boy's sister were at the beauty parlor, and he was at home with his grandmother and a maternal uncle and his family, consisting of a wife and four sons, three older than the patient and one younger. When the interview was initiated with the grandmother and the child, the uncle told his children to go outside and he went into the kitchen.)
>
> In the course of the boy being asked about what he had been doing during the last two months and whether he had noticed any difference between his activities "now" and before his operation and his answering "nothing" and "no, there was no difference," the uncle returned to the room and said: "I'm sorry to interrupt, but you're wrong __________; you've changed a lot in your phsical activity since I saw you last." The uncle then went on to relate how in the past two weeks the boy had been doing everything that his children had been doing (and keeping up with them), including mountain climbing, swimming for long periods of time, playing ball in the park, running, etc. It was interesting to note that the uncle interjected periodically that the boy would do all these things until his mother came on the scene, at which point apparently he would stop any physical activity in which he was engaging. Throughout this discourse, the child just sat and smiled, and agreed that he guessed his uncle was right. At the conclusion, the grandmother interrupted and pointed out that, yes, he had been doing these things, but that he still had his cough. At this point, the uncle commented: "Well, I haven't noticed him coughing since we've been here."

> At this point the mother arrived, and the child jumped up to show her the pictures he had drawn in summer school that morning (both children were in summer school in the mornings and the mother had been having the boy help her grade the papers of her first grade students in the afternoon.) In doing so, he hastened to explain that one picture wasn't "too good" because the teacher had made him hurry with it.
>
> Through the rest of the interview with the child and his mother, the boy coughed periodically and looked at this mother before responding to questions. (He had not coughed at all before his mother arrived.) Again, the mother insisted that the boy show his incision site to the investigator.

In summary, it would appear that the mother in this case, at the same time as she was restricting the child from certain activities and associations, was also fostering a conception of the boy as well in terms of his physical appearance and his scholastic activities. On the other hand, the boy seemed to be enacting the sick role in relation to his mother (and perhaps his grandmother) and some other kind(s) of role(s) in relation to other persons. On the surface, it would seem that the behavioral descriptions presented here are incongruous with the categorical scheme they were intended to reflect; but two things must be remembered. In relation to the seemingly inconsistent behavior of the "rejective" mother, it seems important to point out "a role is not merely a set of behaviors or expected behaviors, but a sentiment or goal which provides unity to a set of potential actions," i.e., "the same behavior (in this case the seemingly restrictive, protecting behavior) can be indicative of different roles under different circumstances (5)." Although couched in a psychoanalytic framework in which rejection resulted in overprotecting because of guilt felt by the parents, a similar kind of phenomenon was reflected in Shere's comments about the difference between the motives underlying protective behavior by rejective and accepting (protective) parents; i.e., he pointed out that the rejective parents restricted the child to thwart and punish the child, whereas the accepting parents overprotected the child for fear he would hurt himself (6).

And, in relation to the apparent contradictions in the child's behavior, one is reminded again that the design of one's own role performance is based upon the assignment of some purpose or sentiment to the relevant other, and, in this case, one would speculate that the child assessed the role of his mother somewhat differently than that of his uncle. This does not mean merely that the child was responding to different sets of expectations; it implies that the child responded differently toward his uncle than toward his mother because he perceived their behavior (though it may have been the same set of behaviors on occasion) as reflecting different sentiments or goals in relation to their interaction with him.

III. Adaptive

The three adaptive parent-child pairs, (Case Nos. 1, 3 and 7) in the interview group were outstanding in comparison to the others in the study in terms of the matter-of-factness with which the parents and the children dealt with the limiting aspects of the child's illness preoperatively, approached the impending operation and hospitalization, and responded to the seemingly overnight changes in the child's appearance and behavior.

The Preoperative Period. Although all three of the children were physically limited to some extent, the parents apparently treated the cardiac child in much the same way as they treated their nonhandicapped children or would treat a nonhandicapped child (one fifteen-year-old girl was an only child) given the capacities of their respective cardiac children. For example, one mother of a thirteen-year-old Negro boy (Case No. 3) explained that her son took his turn doing the evening dishes (there were eight children in this family) and that he had this portion of the yard for which he was responsible. She pointed out in the interview that she had assigned him a relatively easy section of the yard, but that he had his "job" just like everyone else. All three mothers discussed the impending operation in front of their children in a seemingly realistic manner and talked in terms of being pleased at the prospects of their children being made "normal" by the surgical procedure. The six-year-old girl (Case No. 1), for example, was able, though she had some difficulty with speech, to tell the investigator that she had something wrong with her heart and was going to the hospital to have it fixed. For the most part, the children in this group had learned to limit themselves in physical activities, and there was no evidence that the mothers restricted them to a greater extent within, or pushed them beyond the boundaries indicated by their medical statuses. And, as far as could be discerned, punishment was not administered differentially. For example, when the thirteen-year-old boy (Case No. 3) was asked about what happened when he misbehaved, his very spontaneous reply was: "I get a whippin'," which was the approach to discipline that the mother indicated she used on all of her children.

The children, although they were aware that they had a heart illness, seemed to accept their limitations as a matter of course. In addition, they seemed to view the trip to the hospital as a means of getting to do many of the things that they had not been able to do before (i.e., as a means to an end rather than an end in itself that was to be dreaded and feared). The fifteen-year-old girl (Case No. 7) for example, admitted that she was frightened, but commented that she would be glad when it (the operation) was over so that she could take her driving test and learn to swim and to bowl. The boy indicated that he would be glad to have his heart fixed so that he could play baseball and football "better and longer." (He had been playing these games, but frequently could not run as fast as his brothers and would have to stop playing sooner than they.)

Hospitalization. If the in-hospital observations by the investigator can be accepted as being relatively reliable and valid, it may be said that the behavior manifested by these children in the hospital differed markedly from that of the other children in the study. (In no way is a claim being made here that the preoperative pattern of parent-child relationship necessarily influenced the somatic response of these children to the operations, but it is interesting to note that no medical complications occurred in these children, two of which had the diagnosis of Tetralogy of Fallot and in whom complications were expected from a medical standpoint; and their postoperative behavior did differ from that of the other children in the study--both those who had complications and those who did not.) All three children were sufficiently responsive the first postoperative day to recognize and talk with their parents and the investigator. They were more cooperative with treatments, moved about in bed more and sooner, and were more interested in getting out of the intensive care unit and up and walking than were the other children in the study. The mother of the six-year-old, for example, said she was shocked when her daughter told her on the third postoperative day that she wanted to get out of bed and walk. In addition, they required pain medication for one day, as contrasted with the two days usually expected and the two to three days required by the other children in the study, and reportedly complained very little of pain or other discomfort.

The parents of these children showed what has been termed by hospital personnel as the "usual" or "normal" amount of anxiety and concern over their children on the day of the operation and during the child's hospital stay. One mother (Case No. 7) fainted after she saw her daughter the afternoon of the operation, but as the incident was related by the mother and daughter later, it was seen by them as a rather funny, chance happening. Again, it would seem that the act of fainting itself is not the whole of the event but that its significance in the pattern of interaction is dependent on the sentiment or goal in light of which the act is interpreted by the actors.

At Home After Discharge. These three children progressed during the three to four months after they came home from the hospital as expected by their changed medical status and in some instances more rapidly. There was no evidence that the parents were either holding them back or pushing them faster (in any area) than according to what was allowed by the physicians in charge of these patients. None of the children spent more than the first day home in bed, although they took afternoon naps as recommended by the doctors. By the time of the first posthospitalization interview, they had all been quite active and had been playing outside or had participated in some associational activities. For example, the fifteen-year-old girl (Case No. 7) when she was scheduled to return to the hospital for her three-week check up, talked her mother into going early so that she could look for and buy a formal for the officer installation ceremonies of the organization to which she belonged. As the mother reported this, she commented on how unusual it had been to note that she had become tired on this shopping trip before her daughter had. In fact, the mother related that at the end of the day, after a 140-mile round trip, a morning of walking up and down a shopping section and trying on dresses and a trip to the doctor's office, the girl was still "raring to go and I was exhausted."

By the time of the second posthospitalization visit, all the children were in school except one. Two of them (Cases No. 3 and 7) had returned to school about six weeks after leaving the hospital and in accordance with the doctor's recommendations. Because the little girl (Case No. 1) had been enrolled in kindergarten and there was only about one month left in the semester, the doctor suggested that she wait until after summer to return to school. The mother had made arrangements, however, for her daughter to attend summer school for speech therapy.

In addition, by this point in their postoperative course, these children had engaged in all the kinds of activities they had done before their operations and, in most instances, had done some of the things that they had been anticipating they would be able to do after having their hearts fixed. The little girl had acquired a dog with which she romped around most actively both inside and outside the house. The boy had been able to be more active at school. And, the fifteen-year-old girl had taken her drivers test, and she and her mother and father and two girl friends were planning a four-day trip to the beach the day after the investigator visited them.

From these cases one gets the impression that the parents have provided the children the freedom to explore the seemingly boundless sense of newly acquired energy. They respond to their children's increased capacities for activity not with, "Oh, you shouldn't be doing these things yet," but with, "My, isn't that wonderful"; and should the children tire and lie down to rest, they allow them to do so rather than say, "You had better do your school work so you won't get behind." The parent-child relationships in these cases throughout the course of diagnosis, treatment, and recovery seemed to revolve around the joint definition of new goals rather than the creation of compromises on the basis of which interaction could proceed and the viability of the relationship could be maintained with a minimum of conflict.

Conclusions

Despite the limitations of the study, the following suggestions were made on the basis of the data obtained:

1. The relinquishment of the sick role on the part of a child for whom a surgical cure of congenital heart disease has been achieved does not occur automatically as a result of the child being made anatomically and physiologically normal.

2. The socio-emotional environment with which the child must cope, both prior to and following the surgical correction of his heart defect, may have an equal, if not greater, impact on the manner in which he relinquishes the sick role postoperatively than the fact of his change in medical status.

3. Information about the problematic as well as the "adaptive"

interactional circumstances under which a child tends to retain or relinquish the sick role following a curative operation for congenital heart disease is needed by and would prove helpful to the members of the health professions concerned with the management of these children and their parents throughout the course of diagnosis and treatment of the children's cardiac disease.

4. Sufficient evidence of the existence of the problem that has been explored here has been provided to warrant further investigation of it with revision and refinement of the design and the methods used.

Methodological Problems

Some of the methodological problems encountered derived from the theoretical framework. The interactionist concept of role demanded data on patterns of interaction between parents and children preoperatively and the changes in these postoperatively. I was looking for the parent sentiment values or goals which govern the interaction between the mother and the child. Despite attempts at structured interviews, I ended up, for the most part, asking the mother and the child to describe a typical day in the life of the child. I then probed for specific comments on the dimensions outlined on pages 9 and 10.

The characterization of the three types of parent-child pairs come from the data obtained by the interviews. The major problem here is that both the designation of the preoperative parent-child relationships and the postoperative processes of relinquishment of the sick role were largely a product of my interpretation of the data--both interview and observational data. And, even though I had some criteria and did a crude check of the data with another person, and achieved a 79 per cent agreement between my interpretation and that of the other person, I think I need more validation of the inferences; I need more explicit criteria for classifying or categorizing the parent-child pairs relinquishment of the sick role and more particularly the degree of preoperative sick role performance.

Also I need some additional measures of the phenomenon under study, and this brings to mind one of the conceptual problems I had. You will note from the title that this is a study of role change, presumably concomitant to a change in status from illness to wellness. Yet nowhere in the study will you find anything about a well role. I have to ask the question, is there such a thing as a well role? There would be if I subscribed to the notion that there is a role to go with every status and that one only needs to learn the roles of behavior. However, within the interactionist concept a person occupying one status may play a variety of roles. In the end I had to eliminate the concept of a well role from the study, because I could not conceptualize it. It seems to me that this role is a combination of all the roles that one ordinarily plays when one is well, but I am still dealing with the question of whether there is such a thing as a well role.

And then, too, my definition of the sick role is a rather limited definition.

One other methodological note that I might make has to do with the qualifications of the investigator. Not me as an individual, but rather, who should do this kind of study? Originally I thought that it was a fine combination that I happen to be a nurse and a social psychologist and that this combination was needed to conduct this investigation. I have since concluded that perhaps as a nurse I need to discover the problem that needs investigating and more particularly to interpret the data in light of the relevance of the data for use by nurses and perhaps other health workers. Then as research colleagues to conduct the interviews and do the observations, I would like to have individuals who are schooled in interactionist theory.

Recommendations for Further Research

This investigation and others that have dealt with the extra-medical factors that have a potential influence on a child's response to being surgically cured of congenital heart disease have only scratched the surface of the vast amount of information that is needed and available. This group of children provides a rich area for further research into the nonmedical features of the process of recovery from illness, particularly curable congenital and long term illness. Some recommendations are:

1. In general, a more definitve answer to the questions of

who are the most crucial others for the children and under what circumstances do certain kinds of self-other relationships with them operate in which direction on the manner by which they relinquish the sick role following a change in medical status remains a task for further study. That is, information about the wider interactive world of children with congenital heart disease who will have or have had corrective operations is needed.

2. A more representative sample, at least of children with congenital heart disease, would provide more usable information.

3. The scope of information sought could be broadened and more valid information could be obtained. That is, perhaps the exploration of this problem could be pursued in collaboration with a physician and a psychologist (and possibly a social worker). This would lessen the need for interpretation of the changing medical statuses of these children from physicians' progress notes, and perhaps the psychologist could apply his knowledge of psychometrics as an adjunct to determining the postoperative changes by interview and observational techniques.

4. Information is still lacking about when, where, and under what circumstances problems that may affect recovery occur. Patients could be selected earlier. That is, children could be obtained for study through a private pediatric cardiologist or a hospital clinic at the time of the discovery of the disease and followed over a longer period of time. According to this approach, data could be collected with less resulting strain on the child and the parents and prior to the specific scheduling of the curative

(and anxiety producing) operation. (Some groundwork has already been laid toward this end.)

5. A longer follow-up period after the child is discharged from the hospital is indicated. Although trends regarding the direction and the circumstances in which relinquishment of the sick role was taking place among the eight interview cases were observable at approximately three to four months after the children were discharged from the hospital, chart data indicated that some children were still portraying the sick role as long as two years postoperatively. And, in two of the chart cases, a cyclical phenomenon was observed, i.e., the children apparently began to relinquish the sick role, reverted to sick role behavior when confronted with certain kinds of expectations (e.g., competition at school), then began to relinquish the sick role again when they returned after summer vacation.

6. The recovery process(es) manifested by these children could be compared with those of children recovering from long and short-term illnesses, as well as with adults who are recovering from short and long-term illnesses. For example, there are currently available some adults who have acquired heart defects that are also curable by surgical procedures. It would seem that comparative data of this sort would be most useful to the members of the health professions who are concerned with management of both children and adults who have corrective heart operations.

* * *

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CRITIQUE

of

BECOMING WELL: A STUDY OF ROLE CHANGE

June S. Rothberg

In the role assigned to me, entitled "Critique of the Research," I found myself on the horns of a double dilemma, four horns, two matched pairs, no statistical importance. First, I found it virtually impossible and potentially unfair to evaluate adequately the study just presented on the basis of the document distributed to you. This is a very much shortened version of Dr. Hadley's dissertation, as she has indicated. Therefore, I requested and received the original work. Secondly, because of certain pertinent statements in the body of the original which I will quote later and which Dr. Hadley herself has referred to, I had to face the problem of deciding just what are the appropriate criteria to utilize in evaluating a work entitled "Becoming Well--A Study of Role Change," which is being presented to a research conference.

I made two decisions, 1) to analyze on the basis of the original longer work, and 2) to utilize established criteria for research. For my formal source, I used Kerlinger's Foundations of Behavioral Research (1)

It is only fair that I share my beliefs and biases with you at the outset. It is my understanding that the ultimate aim of all science is theory. The nature of a theory lies in its explanations of observed phenomena; such phenomena occurring as a result of interaction between variables. Formally defined, a theory is an interrelated set of constructs and propositions systematically specifying relationships among variables with the purpose of explaining and predicting the phenomena.

This being the case, the aim of scientific research is to investigate, in a systematic, controlled, empirical, and critical manner the hypothesized propositions, derived from theory, about the presumed relationships among variables. More simply stated, and this is a slight variation of the Abdellah and Levine definition, scientific research is an activity directed toward obtaining valid answers to questions and thus providing new knowledge (2). It is my belief that nursing research should be no less scientific than any other discipline's research. Research by nurses should meet these criteria. It follows then that nursing research is the systematic, controlled, empirical, and critical investigation of hypothesized propositions about the presumed relations between variables basic to the phenomena occurring in the life cycle in man.

The key adjectives describing investigation--systematic, controlled, empirical, and critical--are merely the evident peaks of the iceberg which constitutes the established accepted criteria on which research efforts are judged. I shall specify the appropriate criterion and apply it to the particular aspect of the present work in what I hope will be an organized fashion.

Of the variety of research types--historical, descriptive, explanatory, et cetera--the present work may be classified as being of the _ex post facto_ model in which no experimental manipulation of variables is conducted. The independent and intervening variables are of the assigned type, in the sense that the parent-child relationships, the severity and duration of illness, sex, and others, were established long prior to the investigation and thus beyond the control of the investigator. This general model of research has within it certain inherent limitations since tight controls are not possible. The major restrictions are that one cannot be certain at any high level of confidence that the true cause of the dependent variable is the action of the independent variable, and the control of intervening or extraneous variables is not possible. A further difficulty is that such a model is not truly "replicable," if that is a word. However, there are problems which cannot be approached using any other model, and therefore, one accepts the inherent limitations and modifies one's conclusions suitably.

Now, in terms of specifics. The criteria for the statement of the problem are quite straightforward. To wit: the problem shall pose in clear and unambiguous terms a question concerning a relationship between two or more variables. Further, the problem statement shall imply the possibility of empirical testing. In the body of the longer work there are a preliminary problem statement and a restatement of the problem. They are essentially similar, though not identical. Since there is no formal statement in your copies, I will read Dr. Hadley's statement of the problem:

> The purpose of this investigation was to explore the social-psychological factors which influence the child who has been interacting to varying degrees with others in terms of the sick role to relinquish or retain the sick role as a major base of interaction after he has been surgically cured of a congenital heart disease.

Briefly, the study was conducted in an effort to determine, one, what factors in the child's relationships with others, particularly his parents, facilitate and/or inhibit his coming to identify himself and behave as a well person, or more specifically, to relinquish the sick role as expected according to his changed medical status, or, to delay relinquishment of the sick role following a successful corrective operation for congenital heart disease; two, the effect on the anticipated relationship between specific patterns of preoperative parent-child relationships and the manner in which the child relinquishes the sick role of other structural and interactional variables such as the child's age, sex, school status, degree of preoperative sick role behavior, the family's religion, ethnicity, estimated socio-economic status, et cetera; and three, whether the preoperative parent-child relationships under specified conditions are the crucial factors in determining the manner in which the child relinquishes the sick role or whether other structural and interactional variables are more appropriate determinants of the postoperative behavior. The question at issue is basically whether the preoperative parent-child relationships or the other structural interactional variables are the more important determinants of postoperative behavior.

The paper presented today by Dr. Hadle referred principally to subproblem one. However, the other aspects of the investigation cannot be ignored once the areas of hypothesis and methodology are examined, but I have no intention of discussing the one chapter that Dr. Hadley asked me not to examine.

What of the problem and sub-problem statement? Do they meet the stated criteria? The major problem posits a relationship between social-psychological factors influencing the child in terms of the sick role and the child's relinquishment or retention of the sick role after surgical cure. The sub-problems identify the variables in more specific terms. For example, social-psychological factors become 1) the child's relationships with others, partly his parents, and 2) certain structural and interactional variables, such as age, sex, religion, socio-economic status, et cetera. It may be said that the statement of the major and sub-problems are relatively unambiguous and do imply the possibility of empirical testing.

The criterion for a review of related literature requires that the review elucidate and examine the theory basic to the investigation and that it covers the pertinent prior work in the area. The strongest component of the work under discussion undoubtedly is the presentation of theory and the cogent review of the literatures. The chapters on literature and theory are particularly well written and build an excellent case for the theory as stated.

Most of the appropriate prior work, written from several different perspectives, or developed by several different disciplines, if you will, was evaluated and related to the central theme of this investigation.

As is quite obvious from her presentation, Dr. Hadley is an interactionist in the mode of Ralph Turner when she speaks of role and changes in self-conception. She views the parent-child relationships from the sociological rather than the psychological framework. Further, she concentrates in the original work on the mother-child relationship as the prime factor influencing the behavior of the child to the almost total exclusion of other influences in the child's life.

This, of course, is Dr. Hadley's privilege. One selects a theory. In the present instance, a theory explaining a self-other relationship, and then one designs a study to test that theory. One must explain the rationale behind the theory and Dr. Hadley does this. The investigator is not required to test all the possible alternate explanations. She merely must build a fair test of the one theory she is examining. Therefore, although I possibly might be more comfortable with a psychoanalytic or interpersonalist psychological theory of the parent-child behavior in illness as put forth, for example, by Anna Freud, Alexander Sullivan or Fromm-Reichmann, I do not consider it my prerogative as critic to ask why the study was not done from this point of view. All I can require is that the study present an adequate test of the theory as proposed by the investigator.

Hypotheses have been called the working instruments of theory. They serve to confirm or disconfirm theory by subjecting the theorized explanations of relationships to controlled, empirical testing. Criteria for hypotheses require that the relationships be unambiguously phrased in terms that allow for measurement, give direction to the study and prediction of expected outcomes. Hypotheses shall be testable, limited in scope, consistent with known fact, and stated in simple, clearly defined terms. It is through the use of hypotheses that the various sub-questions inherent in a problem are put to examination. The hypothesis is expected to be developed directly from the problem statement.

What of the case in point? The major hypothesis in this examination was that different patterns of preoperative parent-child but actually mother-child relationship will result in different processes by which a child relinquishes the sick role following a curative operation for congenital heart disease. The sub-hypotheses derived for testing by interview data were that, in the absence of other obvious handicapping illnesses both physical and emotional, and given the achievement of a surgical cure for congenital heart disease:

1. A protective pattern of preoperative parent-child relationship will result in a child-initiated, parent-resisted, and delayed relinquishment of the sick role on the part of the child.

2. A rejective pattern of preoperative parent-child relationship will result in parent-initiated, child-resisted, and delayed

relinquishment of the sick role on the part of the child.

3. An adaptive pattern of preoperative parent-child relationship will result in a jointly-initiated relinquishment of the sick role on the part of the child within the period of time as expected according to his changed medical status.

These were the principal hypotheses. Are they unambiguously stated? Can the stand alone without further interpretation? Unfortunately not. It is possible to read the first two sub-hypotheses with two differing interpretations, and in a small-scale nonscientific investigation I asked two other people to read the hypotheses and state what they understood them to be, and I did get two slightly different interpretations.

The unintended interpretation in hypothesis one is that the delay in relinquishment of sick role is due to action by the child; i.e., was child-initiated and parent-resisted, delay. This, of course, is not the proper interpretation. The proper interpretation is that the delay in relinquishment was due to the action of the parent. However, one would have had to be familiar with the psychological literature on parent-child relationships in order to know the correct interpretation of these hypotheses, if they and the problem statement were all that were available to the reader.

The hypotheses do not account for all of the questions raised in the problem, specifically, sub-problems two and three. No hypotheses appear that predict a direction for the effects of the stipulated structural and interactional variables, such as age, sex, social class, et cetera, on the hypothesized patterns of parent-child relationships or on the retention or relinquishment of sick role. Further, no hypotheses cover the question raised in sub-problem three as to whether it is the parent-child relationships or the structural, interactional variables that are the crucial determiners of postoperative behavior. However, all of these topics are examined in the original work without sanction of hypotheses.

Dr. Hadley states there are four kinds of possible consequences of interaction between the child and the mother--these deriving from theorized concepts of role change. However, the first of these, that "the child could continue to enact the sick role and have his performance validated by his mother," was never examined. Is it not quite conceivable that this outcome could occur with the protective mother-child pattern? One wonders why this consequence, so obvious a possibility, was not investigated. Further, there is some concern as to the extent to which the hypotheses actually determined the methodology of the study. For greater clarity of discussion, operational definitions, delimitations, and research design will be examined jointly under the overall rubric of methodology.

Operational definitions give meaning to variables by specifying the activities or operations necessary to measure the variables. They are the bridges between the theory-hypothesis, level of discourse, and the level of observation. Obviously, one cannot observe an hypothesis, but one can observe behavior. Research is totally dependent on observations regardless of the form they take. Observations are dependent, in turn, upon clear and specific instructions on what and how to observe. Operational definitions are just such instructions. Therefore, operational definitions must by crystal clear, explicit, unmistakable, and free of value terms. Without such operational definitions, it is not possible for the reader to know precisely what was being observed or on what information conclusions were based, or for him either to verify or replicate the study.

I shall read some of the definitions for the study.

> Illness is a status in which there is a disturbance in one or more spheres of individual capacity to meet the minimum physical, physiological, psychological, and social requirements for appropriate functioning in a given stage of growth and development.
>
> Wellness is a status in which the individual of a given sex and at a given stage after growth and development is capable of meeting the minimum physical, physiological, and social requirements for appropriate functioning in the given sex category and at the given growth and development level.
>
> Although the terms minimum and appropriate imply the existence of some kind of normative standards which seem legitimate for the purposes of this study; they have been used here in an effort to avoid the problems of vagueness and measuring of such things as "optimum" or "normal" capacities for functioning.

The assumption here is that minimum requirements for appropriate functioning are discernible and allow for variability of capacity to meet the requirements beyond a minimal level. These definitions are obviously neither explicit or unambiguous, and I do not see any point in pursuing this part of it further. There are also definitions of the variables: protective, rejective, and adaptive patterns of parent-child relationships and in the appendix of the original study, there appear criteria for classifying behavior according to the various patterns. Unfortunately, these criteria do not contain mutually exclusive categories, nor are behaviors spelled out to the point that they are free from the possibility of varying interpretations, leading to large problems of internal validity. These observation guides, as well as certain other measurement tools, are not safe from the possibility of observer bias or from problems of reliability and replicatability.

Dr. Hadley states that the emphasis in her study has been placed on the patterns of interaction between parent and child. She acknowledges that she can only infer interaction patterns from the information on patterns of relationships which had been obtained through the use of the observation guides. We are now in the uncomfortable position of having to view the findings with some skepticism since they are dependent in large measure on observations which may not be valid and reliable.

The main criteria for a research design repose in the following questions: Does the design answer the research questions posed? Does the design adequately test the hypotheses? Does the design adequately control the independent variable and eliminate the influence of extraneous variables? Is the congruence between the research questions posed, (i.e., the problem statement) the hypotheses, and the research design? Without an affirmative answer to each of these queries, no conclusions can be drawn because the research problem posed is not answered.

The criteria questions raised all refer to issues of internal validity. In addition, there are queries concerned with external validity, which may be defined loosely as generalizability. These questions would include those about representativeness, both of sample and of variables. For example, can it be assumed that the same parent-child interactive patterns occur with cardiac children living in different parts of the country or in different socio-economic strata? Is this purely a Southern California phenomenon like the fabled old ladies in tennis shoes?

The author quite properly noted both in the document and on the podium this morning the limitations inherent in her study. Herein she speaks for herself. Certainly no claim can be made that "the limited data in this study provided even a rudimentary test of the theoretical propositions from which the hypotheses were derived." She lists the limitations of data to include, and I am quoting her, "the crudeness of the measures, the highly select nature and size of the sample, the availability of interview data, and the circumstances under which it was sought." She continues, by stating as indicated previously, that no claim has been made that "rigorous tests of the hypotheses have been provided." At best, given the limitations of this investigation, it may be said that the findings provided clues to some of the interactional circumstances under which relinquishment of the sick role was delayed or occurred as expected according to a changed medical status on the part of a select group of children who had corrective operations for congenital heart disease in a large, metropolitan children's hospital. It is the investigator's hope, however, that the findings have demonstrated that the problem was worthy of investigation and that the hypotheses, constructs, instruments, and indices merit further refinement and exploration.

There is no purpose in belaboring the point. What are we left with? We are left principally with a group of findings that are suggestive rather than hard data. This is an exploratory work of the pilot study type. Dr. Hadley has raised a most interesting question, one that has actually not as yet been adequately answered, because no matter how insightful the conceptualization, no matter how strong and well developed the theory, no matter how exquisitely formulated the problem and hypotheses, no matter how explicit and thorough the review of the literature, without a well-designed methodology to answer the questions posed, the research is not complete simply on the basis that no conclusions can be drawn from it. Therefore, since this is an extremely provocative area of study, it is to nursing's advantage that Dr. Hadley plans to pursue this question further.

All good research raises more questions than it answers. In addition to Dr. Hadley's recommendations for further study, I would like to raise the following: one might speculate on the reverse of the paradigm posed that the predominating force in the mother-child interaction pattern stems from the parent, so that the child responds to her as his relevant other. The mother's role has been that of parent of a sick child, and in her role behavior she has been responsive to his conditions and behavior as her relevant other. Her role has been equally a consequence of their interaction. What changes must occur in her perceptions of him in order for her to move into the new status of mother of this now well child?

* * *

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SUMMARY

of

GENERAL DISCUSSION

In reply to a question about whether or not according to interactionist theory one must narrow the interaction to that between two people, Dr. Hadley stated that the concept does not narrow it to two people and that some of her problems were due to the fact that she focused upon the parent-child interaction. There was difficulty in interpreting postoperative behavior in at least one of the deviant instances because there was a question as to whether the child and his mother had been misclassified as a pair preoperatively or whether the interaction with relevant-others had a greater impact on his identification of himself as sick. The importance of various relevant-others, such as the hospital nurse, the father, a grandparent, et cetera, was also noted. It was agreed that the future design of the study should take account of the influence of as many significant relevant-others as would be possible.

Because it was recognized that in studies of this kind it takes such a long time to collect the necessary data, it was suggested that the use of a quasi-experimental design such as the technique of nested chi-squares might be useful. In this way replications of the study in various parts of the country could be used to help accumulate data.

The operational definition of "delay" was given as the relinquishment of the sick role by the child in his interaction with his mother beyond the time when the physician said he no longer had to restrict his activities. The problem of controlling the variable of physician difference in the judgement of the child's wellness was discussed. Control of this variable will be an important consideration in the future continuation of the study.

It was pointed out that Dr. Hadley's work is one case of the larger problem of general role relinquishment that everyone experiences and that it might be of interest to compare it with other sources of role relinquishment, e.g., getting a divorce, leaving graduate school, et cetera. Also of interest is role learning, e.g., how the child learns the sick role. Within the interactionist concept of role, role learning takes place in pairs. The assumption underlying this study derived from the fact that from the time the congenital heart defect is discovered the child interacts with people in the health professions. For example, it was discovered from the review of the hospital records that the people in the child's school were among the most important others in imposing the sick role.

It was also suggested that in any extension of the study consideration might be given to extending the sample to include children with other illnesses, such as cystic fibrosis, to see whether the categories used, adaptive, protective, and rejective, are generalizable to parent-child pairs where the children have different kinds of diseases.

The theory of pattern integrations rather than role theory was introduced as one which might be useful in a study of this kind. The investigator could deal with the patterning of the child's behavior in relation to the mother's behavior, as well as in relation to the behavior of others. It could be that there are a number of different people to whom the sick child is exposed and who over many different pattern integrations has something to do with the perpetuation of his illness. For example, if a pattern of domination-submission is found in one situation, then the same design can be used to look at other situations. In this study, the total sick role is not dealt with, only small pieces of the role. A more useful approach might be to take smaller bits of the role such as verbal or nonverbal transactions between the child and others and examine these to see how the pattern integration is contributing to the long-range consequences to the child.

It was proposed that the purpose of this study could have been achieved without the use of hypotheses since these were not tested. In this investigation the hypotheses served as guidelines to exploration; however, they will be refined as the investigation continues. The question raised was in regard to whether hypotheses should be stated if they cannot be tested adequately, as in an *ex post facto* design of the sort used here. Dr. Hadley's hypotheses were stated in terms of causal relationships and it was agreed that with an *ex post facto* design one cannot really know that there is a causal relationship. It was suggested that if one is going to use this design, then one states the kind of proposition one wishes to test. However, it was also pointed out that a bias regarding design might be operating here. The point was made that Kerlinger, a methodologist whose reference was cited by Dr. Rothberg in her critique, maintained his methological bias in his book, Foundations of Behavioral Research. For example *ex post facto* approaches are discussed under "poor designs:" the next chapter dealing with "good designs" discusses experimental and non-experimental research.

Dr. Hadley explained in response to a question that she used the fact that she was a nurse to gain entre to both the hospital and the families studied. Her approach to families was that of a nurse who was conducting an investigation about children with congenital heart disease for the purpose of contributing to the knowledge which would help improve care. She believed she was fairly successful in keeping the fact that she was a nurse in the background and in remaining the objective investigator. She did not think her nurse-role influenced the child's continuance of the sick role in her meetings with the subjects since she became the "lady who came to ask questions." The need to identify as a nurse was related to the problem of obtaining the patients for study in the first place. Some of the physicians did not want her interfering with their patients--and some families did not want to talk with her until after the operation was over.

Dr. Hadley made the point that her study was primarily a social-psychological one, not a nursing study. While the findings of the study might be potentially useful to people in the health professions, these findings were so limited at this point that she would hesitate to discuss the implications for nursing. However, the study suggests a number of questions which might be examined further, e.g., nurse effectiveness in changing other people's concepts of the sick and well roles, the effect of the roles other than the nurse role which nurses assume in responding in some situations, and the influence of nurses on the child's portrayal of the sick role.

The notion was brought forth that the definition of a parent-child relationship as a mother-child relationship might have to do with the fact that nursing is primarily a female profession. Are we too simplistic and too ready to work with what we assume to be more familiar, therefore better understood variables? We should be aware of our biases and interests and how these affect our research interests, designs, and analyses. It was suggested that in behavioral research in nursing there is a bias toward the sociological and the psychological perspectives and that in this study the anthropologist might have much to offer.

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A COMPARISON OF CRISES: MOTHERS' EARLY EXPERIENCES WITH NORMAL AND ABNORMAL FIRST BORN INFANTS

Alice M. Hosack, R.N.

This paper was not available for publication. Therefore, it is with regret that the critique, offered by Dr. Lillian Runnerstrom, C.N.M., Ph.D., R.N., has been omitted, along with the summary of the participant discussion which followed.

THE CARE OF THE MENTALLY ILL IN AMERICA, 1604-1812, IN THE THIRTEEN ORIGINAL COLONIES

Dora Mae Eldredge Blackmon, R.N., Ph.D.

Carl Becker, the great American historian, has defined history as the knowledge of things said and done. This is an all-encompassing definition which is quite different then from the definitions given by 19th Century historians. The British historian, R.G. Collingwood, has defined history as a science which is concerned with human actions in the past, pursued by interpretation of evidence for the sake of human self-knowledge. Today you would find three positions which are generally accepted by American historians. One is that history is the study of what men have done and said and thought in the past. The second point of view is that history is biography that is a work of the creative imagination in which the author attempts to create the thoughts and life of a particular man who actually lived at a certain time. And then the third position is that history is the study of man in his environmental aspects both past and present.

There may also be differences of opinion today as to the problem of completeness. There is still some tendency in European institutions to make the writing of a dissertation a life's work.

LeFevre spent 40 years writing his dissertation on the French Revolution. This seems a bit long in our present society. It would seem that all historical studies have to be done, to some extent, on a limited amount of evidence. For example, those studying ancient history have very little left to work with. Twentieth century history poses similar problems, since there is so much material it cannot be encompassed and therefore one can study only a fragment of it.

The problem of enormous amounts of material is true for the colonial period in this country. There is a great deal of material in county archives. This material is frequently not indexed and one may spend weeks or months going through boxes of paper to find one item. Therefore, time and money do place certain limitations on the study that can be undertaken.

I became interested in this historical study of the mentally ill because of my interest in psychiatric nursing. I knew I would probably not find nurses in the colonial period in the sense we know them today; however, some type of care of the mentally ill must have been given which could be examined. And, according to Taylor, anything that grows and develops can be understood by studying it historically. It appeared that a study of the management of the mentally ill would bring some light to bear on our present day methods of psychiatric nursing.

Some very capable historians have contributed to the recording and interpretation of various phases of the history of the care of the mentally ill in the western world. To date there has been a tendency to trace the developments from ancient time to the seventeenth century in Europe and then begin the American story with Benjamin Rush in 1783. Such an approach ignores the two centuries of development in America which preceded Rush's work. It is with these two centuries, the seventeenth and eighteenth, that this paper deals.

In order to understand such things as laws which forced the insane to wander from one settlement to another, which provided funds to a family to build a five by seven foot shack in the backyard in which to chain a mad relative, or which permitted some hysterical persons to be tried and executed for witchcraft, it is necessary to see these things as a part of the development of society's attempt to handle a problem which for centuries has defied understanding.

A study of the mentally ill in colonial America is not easily undertaken. Much of the material is still in manuscript form in local and county archives and in personal letters and papers which are not readily accessible. Even in the materials readily available, there are problems in finding the references desired. At best references to insanity in any given collection are sporadic, but this, coupled with the failure of many materials to be indexed for these items, compounds the problem. Nevertheless, it is possible to piece together the bits of information and to identify the major aspects of the care of the mentally ill in America during the seventeenth and eighteenth centuries.

COLONIAL LEGISLATION RELATIVE TO THE INSANE

The legal status of the mentally ill evolved gradually in colonial America much as the application of the poor laws to the insane had. With regard to this legal status of the mentally ill, several points present themselves for consideration: 1) the legal definition of insanity, 2) the criminal responsibility of the insane, 3) the protection of society from its insane members, and 4) the legal rights and responsibilities of the insane. The general attitude of the courts during the seventeenth century regarding criminals and other undesirable persons was based upon a desire to protect society at the least possible cost. This was achieved by executing the serious criminals and by banishing minor offenders. To have imprisoned offenders for long periods of time would have cost the taxpayers a considerable sum, left the prisoner's relatives without support, and left men idle during a period when the community needed all the manpower that was available (1).

The legal definition of insanity is a complex one to deal with because the mental capacity or incapacity must be determined so that the ruling is an unqualified one of competence, or incompetence.

The civil rights of the insane and the question of criminal responsibility had both received the attention of the English judiciary before 1600. Sir Thomas de Littleton (1407-1481), a judge of the Court of Common Pleas in 1466 took up the question of the civil rights of the insane. Complete madness was used as a defense to criminal charges during the reign of Edward III (1327-1377); prior to Edward's reign, the fate of insane persons committing crimes was decided by the willingness of the king to grant a pardon. The knowledge of good or evil as a test of criminal responsibility was set forth in a handbook for justices of the peace by William Lambard in 1581 (2). The writings of Littleton and Lambard provided the background for Sir Edward Coke (1552-1634) who provided the colonists with the standard reference on English law. The four volumes of *The Institutes of the Laws of England*, or *A Commentarie on Littleton, not the Name of a Lawyer onley, but of the Law Itself* by Coke were published between 1628 and 1644.

Coke opens his discussion with Littleton's definition of insanity:

> Here Littleton explaineth a man of no sound memorie to be *non compos mentis*. Many times (as here it appeareth) the Latin word explaineth the true sense, and calleth him not amens, demens, furiosus, lunaticus, fatuus, stultus or the like, for *non compos mentis* is more sure and legal (3).

Thus Coke endorsed the term *non compos mentis* which became the term for legal incompetence in both England and America. In the *Institutes* are listed the four kinds of *non compos mentis* which were recognized in the colonial courts:

> *Non compos mentis* is of four sorts: 1. Ideota, which from his nativitie, by a perpetuall infirmitie is *non compos mentis*. 2. Hee that by sickness, griefe, or other accident, wholly loseth his memorie and understanding. 3. A lunatic that hath sometime his understanding and sometime not, *aliquando gaudel lucidis intervallis*, and therefore he is called *non compos mentis*, so long as he hath not understanding. Lastly, hee that by his owne vitious act for a time depriveth himselfe of his memorie and understanding, as he that is drunken. But that kind of *non compos mentis* shall give no privilege or benefit to him or to his heires (4).

Since the civil acts of *non compos mentis* are void, such a person cannot transfer his property, hence it reverted to the Crown. This maxim in Common Law was based on a ruling from the Court of the King's Bench in 1[illegible]04 in the case of Snow vs. Beverley, usually referred to as Beverley's case.[1] In his commentary on the case, Coke made reference to another important maxim in the law dealing with the insane: "*furiosus solo furore punitur*, a madman is only punished by his madnesse (4)."

Coke also took up the question of insanity as a plea in criminal proceedings:

> he that is *non compos mentis* and totally deprived of all compassings, and imaginations, cannot commit High Treason by compassing or imaging the death of the King: *for*

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[1] Beverley, a *non compos mentis*, gave bond to Snow for one thousand pounds. Snow brought suit on the bond and a rule was issued in order to determine whether Beverley was a "rational and free agent" when he executed it. The Court of the King's Bench decided on a construction of the statute *De Praerogative Regis* that the civil acts of those who were *non compos mentis* were void (Snow v. Beverley, 4 Co. Rep. 125b, 16 Ruling Cases, 708; Coke, *Institutes*, II, 247; Biggs, *Guilty Mind*, 85-86).

> furiosus solo furore punitur: but it must be an absolute madnesse, and a total deprivation of memorie. And this appeareth by the Statute of 33.H8 (5).

In this statement there is no test of the knowledge of good or evil; the only test is the determination of "absolute madness." Such was the law with regard to insanity that the colonists inherited from England.

Coke's interpretation of the law was modified and expanded by Sir Matthew Hale (1609-1676) in his Historia Placitorum Corone: The History of the Pleas of the Crown, the first edition of which was published shortly after his death in 1676. Hale, lord chief justice of the Court of the King's Bench, cited Coke and then set out to give some practical means of determining the mental state of the person in question. An idiot according to Hale is one, "who knows not to tell 20s, nor knows who is his father or mother, nor knows his own age (6)." Hale then took up dementia and differentiated between two types--partial insanity and total insanity (7).

Hale described the person suffereing from partial insanity, as someone that has competent use of his reason in respect to "some particular discourses, subjects, or applications, or else it is partial in respect of degrees (7)." Ordinarily this type of insanity did not excuse one for any capital offense, but he conceded that it is very difficult to identify a line which divides perfect and partial insanity, and the circumstances in each case must be carefully weighed by the judge and the jury. As a guide in these cases, Hale suggested that the following test be applied:

> the best measure that I can think of is this; such a person as labouring under melancholy distempers hath yet ordinarily as great understanding, as ordinarily a child of fourteen years hath, is such a person as may be guilty of treason or felony (7).

Here again is the application of the test of the knowledge of good and evil because a child of fourteen was regarded as being able so to distinquish.

The phenomenon of "lucid interval" was also taken up by Hale; "*phrenesis* or madness" is a permanent or fixed condition, but "lunacy" is intermittent. As the term lunacy implies, these variations were attributed the effects of the changes in the moon. During the lucid intervals, they have "usually at least competent use of reason," and are responsible for crimes committed and bound by contracts made during these intervals. Such a concept made the application of the law to the insane a difficult matter to interpret. Hale closed his discussion of insanity with an interesting interpretation of "*dementia affectata*, namely *drunkeness*;" in this case the offender should be punished for his drunkeness rather than for the crime committed thereby (8).

The various editions of Coke and Hale became important parts of the law in colonial America, and the combination of these, the precedents established in the colonial courts, and a few specific statutes resulted in the law in the American colonies relative to insanity. The first tract on medical jurisprudence printed in the United States was written at the beginning of the nineteenth century by Thomas Cooper, M.D., who was a professor at the University of Pennsylvania and who also served as a circuit judge in Pennsylvania. Although this work was technically a product of the nineteenth century, Cooper drew his material from the seventeenth and eighteenth century. The work took the form of four essays on medical jurisprudence which had appeared earlier in England, plus a digest of the common law in America relative to insanity, which Cooper compiled himself. According to Cooper, insanity became a legal question in the following four instances: 1) when a certificate of insanity was required by specific act of the legislature before a patient can be sent to a mad-house; 2) when insane persons had to be committed to the care of their friends for the security of their persons or property; 3) when civil contracts were disputed on the basis of the insanity of one of the parties; and 4) when insanity was set up as a defense against an indictment for a crime (9).

Despite the provisions for insane persons accused of capital crimes, there was no such provision for those individuals whose deviant behavior brought them in conflict with the law on charges of less magnitude. Such was the case of Lydia Wardwell who was accused of going into the Newbury Meetinghouse in the nude. At her trial in Salem, Massachusetts on May 5, 1663, the court sentenced her to be "severely whipt and pay the costs and fees to the marshall of Hampton for bringing her. Cost, ten shillings; fees, two shillings and six pence (10)."

At the session of the Suffolk County Court on October 29, 1672, Sarah Blacklock was convicted of "belying & falsely accusing her

Selfe, in Saying shee miscarried of a Childe which was buried privately, who upon Search made is judged never to have had a Childe (11)." She was sentenced to be severely whipped with 20 "Stripes," to pay prison charges and fees, and to serve her master enough time to make up for what she had lost (11). Two years later at the session of the same court on April 28, 1674, the mental condition of another prisoner was taken into consideration; the charge was fornication to which Sarah Stevens had confessed when she was arrested, but which she denied at her trial. The court found her guilty, but "judging by her carriages & testimonies concerning her that shee was a distempered crazy woman discharged her (12)."

The trial of a Negro called James at Fort Hendrick, New York on February 22, 1674 illustrates another method of dealing with insane persons who were found guilty of crimes. James was found guilty of "divers evil deeds and actions, using force in breaking doors open, beating women and children, burning houses and threatening further acts of arson (13)." After being sentenced to be severely whipped, to be banished from the county, and to pay costs, he was pardoned because he was not in "possession of his right reason," and then bound over to the custody of the magistrate on Staten Island who was to put James to work and was empowered to punish him if he misbehaved (14). This is one of the first times in colonial America that an insane person was remanded to custody after being pardoned in an action taken for the protection of the public from any further acts of violence.

In Westchester County (c.1710-11), Dinah Kirkpatrick, "a lunatic," upon complaint of distrubing the peace was ordered to be kept at home by her husband (15). At the Suffolk (New York) Oyer and Terminer and General Goal Delivery in 1723, Elizabeth Horton was indicted for murdering her child, and at her arraignment, Elizabeth stood mute. The Court then ordered an inquest to determine why the prisoner stood mute. The jury returned the verdict, "that the prisoner at barr does not stand mute through malice or obstinacy and also find that before and at the time of committing the fact she was mad and is so at the present time (16)." The records fail to show what was done with Elizabeth, but this very lack of any further records on the case indicate that she was never brought to trial for her crime.

In 1752, the deviant behavior of the schoolmaster in Savannah, Georgia, was brought to the attention of the Trustees in London in a letter from the President and Assistants at Savannah. For sometime the schoolmaster, Mr. Holt, had "behaved pretty well and had a thriving School, but of late his Behavior has been so bad that he has but few Scholars." The letter went on to say that the President would probably be obliged to send the distracted Mr. Holt back to England on the first boat sailing directly from Savannah to London. The Trustees recommend to the Common Council: "...that if Mr. Holt the School Master is desirous of returning to England, rather than continue, and settle as a Planter in Georgia, the Freight of his and his Wife's Passage should be paid by the Trust (17). Although Mr. Holt was offered the opportunity to remain in Georgia if he so desired, he was removed from his position as schoolmaster.

In one of the rare cases during the colonial period when a plea of insanity won an acquittal for a murderer, Roger Humphrey of Simsbury, Connecticut was acquitted for killing his mother in 1757. Humphrey was a veteran of the Indian wars where he had distinguished himself, and this seems to have been a factor in according to him the unusual treatment that he received. The court provided that Humphrey's father erect a small building near his house in which to confine his son, and that the cost of the building and the cost of maintaining Roger be paid from the treasury (18). While the small houses for confinement were not so rare, it was most unusual to make such a generous long term financial commitment.

An important group of laws affecting the insane in colonial America were those dealing with witchcraft. The belief in witchcraft is older than civilization; by it man sought to explain many of the evils which beset him in terms of demon possession. The devil was not only blamed for sin but for madness, senility, impotence, hysteria, and many psychopathic symptoms. By sanctioning witchcraft, the church indirectly directed the attention of man away from the study of mental illness. The symptoms which were later attributed to various mental illnesses were believed to be the direct result of the influence of Satan. For any one to have considered these symptoms as related to any natural process would have been heresy.

The witch hunt in Europe was started by the Catholic Church during the thirteenth century. The Church needed a set of rules and regulations for those who were to set about ridding the Church of witches and sorcerers. This was provided by two monks, Henry Kraemer and Johann Sprenger, in a work entitled Malleus Maleficarum (The Witch's Hammer). A papal bull issued by Innocent XIII on December 9, 1484, made the work official and for the next two centuries The Witch's Hammer was the handbook of the Inquisitors (19, 20).

The belief that witches and sorcerers voluntarily made compacts with the devil was so deeply embedded in the religious thought of the medieval period that the Protestant Reformation failed to diminish its fervor. In fact, Martin Luther and John Calvin retained and even accentuated the attitude of the Catholic Church regarding the devil's part in the production of evil through the medium of witches and sorcerers, and the witch hunt was carred on with increased intensity in the Protestant countries. The height of the witchcraft persecutions in England was reached at the same time that Puritanism exerted its greatest influence.

The first legislation against sorcery in England was passed in 1541, and the English law became the basis for the persecution in the American colonies. The relationship between witchcraft and insanity is rooted in the test of the knowledge of good and evil which was applied to both. In 1630 Michael Dalton wrote a handbook for the justices of the peace in England which was used in the American colonies as well. The section it contained on witchcraft became a leading authority for the Salem witchcraft trials (21). In his *The History of the Pleas of the Crown*, Hale cited the case of Amy Duny and Rose Cullender who had been tried, convicted, and executed for witchcraft in 1664. Hale had presided at the trial and wrote the following description of his ruling:

> That there were such Creatures as *Witches* ...[there was] no doubt at all; For First, the Scriptures had affirmed so much. *Secondly*, The wisdom of all Nations had provided Laws against such Persons, which is an Argument of their confidence of such a Crime. And such hath been the judgment of this Kingdom, as appears by that Act of Parliament which hath provided Punishments proportionable to the quality of the offence. And desired them [the jury], strictly to observe their Evidence; and desired the great God of Heaven to direct their Hearts in this weighty thing they had in hand: *For to Condemn the Innocent, and to let the Guilty go free, were both an Abomination to the Lord* (22). (Italics are in the original.)

Sir Matthew was a man of unquestionable integrity and a leading lawyer of his time and his ruling set a precedent which guided witch hunts in England and America. The record of this trial of Duny and Cullender was published in London in 1682 in a booklet entitled *A Tryal of Witches at the Assizes held at Bury St. Edmunds*. This booklet was widely distributed in America and "was a Tryal much considered by the Judges of New England (23)." Cotton Mather included an abridgement of the booklet in his *Wonders of the Invisible World*.

According to Thomas Hutchinson, the Court of Oyer and Terminer in Salem made use of "Dalton and other lawyers, then of first character who lay down the rules of conviction" in trying those accused of witchcraft (24). Judge Samuel Sewall who was one of the judges at the trials in Salem had a copy of Coke's Institutes which he frequently made use of in the conduct of the trials over which he presided. Coke's discussion of witchcraft was detailed and explicit; it began with definitions of a conjurer, a witch, an inchanter, and a sorcerer, and then the Biblical admonition "Thou shalt not suffer a witch to live." The penalty for the following offences, according to Coke, was death:

> 1. If any person or persons shall use, practice, or exercise any Invocation or Conjuration of any evill and wicked Spirit.
>
> 2. Or shall consult, convenant with, entertaine, employ, feed, or reward, any evil or wicked Spirit, to, or for any intent or purpose.
>
> 3. Or shall take up any dead man, woman, or childe, our of his, her, or their grave, or any other place where the dead body resteth, or the skin, bone, or any part of a dead person, to be imployed or used in any manner of Witchcraft, Sorcery, Charme, or Inchantment.
>
> 4. Or shall use, practice, or exercise any Witchcraft, Inchantment, Charme or Sorcery, whereby any person shall be killed, destroyed, wasted, consumed, pined, or lamed, in his, or her bodie, or any part thereof.
>
> 5. That then every such offender or offenders, their aiders, abeters, and counsellors, being of any the said offences duly and lawfully convicted, and attained, shall suffer paines of death, as a felon, or felons, and shall lose the priviledge, and benefit of Clergie, and Sactuary (25).

The law regarding witches left no doubt regarding the necessity of seeking out and punishing those persons believed guilty of witchcraft.

The history of witchcraft during the American colonial period has probably received as much treatment as any phase of American history. The bibliography of witchcraft is almost limitless. The Salem incident in particular has been rewritten by every generation and is still a matter of much contention among historians, anthropologists, and psychiatrists. The labels and explanations for it are nearly as numerous as the authors who have written about it. A recent explanation has been that of mass hysteria built upon a thesis of contagion for mental illness.

It would be incorrect to say that all who were accused of being witches and sorcerers were mentally ill, but there is no doubt that many of them were. During the witch hunts anyone who was mentally ill was in danger of being regarded as a witch. Mental illness was something for which the seventeenth century had no real explanation and whenever man was at a loss for an explanation he looked for it in the supernatural.

The belief in witchcraft was not confined to New England; there were incidences reported in several of the American colonies, although the Salem incident resulted in more convictions and executions and has, therefore, been the most famous. As early as 1636 the Plymouth colony was apparently distrubed by a fear of witches because laws were enacted which made witchcraft a crime. In 1641, Massachusetts enacted a law against witchcraft based on the Bible test: "if any man or woman be a witch, that is hath or consulteth with a familiar spirit, they shall be put to death," and in 1642 Connecticut enacted the same law (26).

Connecticut has the rather dubious honor of recording the first execution for witchcraft in 1647 when Mary Johnson was hanged for being a witch (27). It would also appear that this was a case of an insane person being convicted of witchcraft on December 7, 1648, "the Jury finds the Bill of Inditement against Mary Johnson, that by her owne confession shee is guilty of familiarity with the Devill (28)." According to Cotton Mather, she confessed to "the Murder of a Child, and . . . [to] Uncleanness with Men and Devils (29)." This is a delusionary pattern very suggestive of schizophrenia.

The following year Margaret Jones of Charlestown, Massachusetts, was executed for witchcraft. At her trial, Margaret vigorously protested her innocence and was condemned by the Court for her notorious lying. She was found guilty and on the appointed day paid the supreme penalty. By coincidence at the hour and day of her death, there occurred in Connecticut a severe storm which blew down many trees. This coincidence led Governor Winthrop to conclude that this was absolute proof of her guilt (30).

Sporadic cases of witchcraft appear in the colonial records from time to time and doubtless many persons were suspected or accused of witchcraft who were never brought to trial. Not all persons brought to trial were found guilty. In Springfield, Massachusetts, in 1651 Hugh Parsons and his wife were accused of witchcraft and finally acquitted, although his wife was subsequently executed for murdering her baby (31). This is another case which strongly suggests that Mrs. Parsons was insane; murder of an infant by its mother is usually the result of a postparteum psychosis, especially in a person with Mrs. Parson's unusual behavior which had resulted in her being tried as a witch.

The following case in Pennsylvania is another instance of an insane person being accused of witchcraft. In 1684, Margaret Matson of Delaware County was accused of being a witch and brought to trial. William Penn presided at the trial and although the woman frequently confessed that she "had ridden through the air on a broomstick" the case was dismissed because Penn said he knew of no law against such a means of locomotion in Pennsylvania. This verdict set a precedent which ended criminal prosecutions for witchcraft in Pennsylvania (32).

The Salem witchcraft episode was preceded by a case in Boston in 1688 which probably contributed directly to the events that occurred later. The daughter of a reputable citizen, John Goodwin, got into an altercation with a high-tempered woman named Glover. Following a tongue lashing by Mrs. Glover, Martha Goodwin began to have diabolical fits in which she was soon joined by her sister and two brothers. Cotton Mather was alarmed by the case and took Martha into his own home where he attempted to cure her by exorcising the evil spirits which possessed her. In the effort he was unsuccessful. Mrs. Glover was arrested and subsequently executed (32).

Mather has been credited with promoting the witchcraft episode in Salem. It is certain that he, along with many of the other influential ministers in Boston, contributed to the events which took place there, but to lay the entire episode on any one individual is not realistic. The Salem episode grew out of the activities of a group of young girls who gathered weekly at the village minister's house to play at fortune telling and palm reading, and to discuss the supernatural.

In Salem where the invisible world of Satan was imminent and real to the parents of these girls, it was not long until the imagination of some of them apparently broke through the bounds of reality. They began to have visual and auditory hallucinations and to dream strange dreams. The situation soon came to the attention of the elders who after an investigation concluded that the girls were bewitched. The investigation included a medical examination by Dr. Griggs of Salem, who, finding no suitable diagnosis in his medical books, said the evil hand was on them (33).

The girls were much elated with the attention they received, and the hysterical symptoms were exaggerated to include cataleptic seizures, convulsions, and various manifestations of manic behavior. When they were questioned for the names of those who bewitched them, the girls named first one and then another until it seemed that half of the inhabitants of Salem were involved. The hysteria spread and soon others were exhibiting these symptoms. In one year (1691-1692) 250 persons were arrested and tried on witchcraft charges in Salem: 50 were condemned; 19 were executed; two died in prison; one died of torture (34).

During the trials women confessed to riding broomsticks through the air; consorting and having carnal relations with devils; pinching and otherwise annoying their neighbors; and causing illness and death through black magic (35).

Thomas Brattle, a contemporary witness to the Salem witchcraft trials and an eminent scholar, made some significant observations regarding the mental status of the participants in a letter to an anonymous London clergyman. Regarding the 55 persons then held in jail, he stated (in a letter to a clergyman, October 8, 1692) that many were known to be distracted and crazed women who

> ...are deluded, imposed upon, and under the influence of some evil spirit; and therefore unfitt to be evidences either against themselves, or any one else. These confessours (as they are called) do very often contradict themselves, as inconsistently as is usual for any crazed, distempered person to do (36).

Brattle went on to describe the accusers (the bewitched) as

> ...afflicted persons who have scores of strange fitts in a day, yet, at the intervals of time are hale and hearty, robust and lusty as if nothing had afflicted them. I strongly suspect that the Devill imposes on their brains, and deludes their fancye and imagination; and that the Devill's Book (which they say had been offered them) is a mere fancye of theirs, and no reality (36).

Cotten Mather kept a clinic at his home for the possessed where he might keep them under supervision and where he offered prayer for them. In A Brand Pluck'd from the Burning, Mather described the "bewitchment" of Mercy Short, a servant, who testified in the witchcraft trials (37). Despite the fact that Mather still believed bewitchment was possible, he held some sound views on the cause and treatment of mental illness; which were discussed above (38).

In May 1693, Governor Phips of Massachusetts issued a proclamation releasing from custody all persons still confined in prison on witchcraft charges. One hundred fifty persons were released, thus bringing to a close the Salem witchcraft episode. The reason for ending the witch hunt at this particular time remains debatable, but it is generally conceded that when the accusers began to point at persons of integrity like the Lady Phips, herself, the populace began to reconsider the whole question. It is doubtful, however, if they ceased to believe in witches; it seems rather, that they began to doubt that all who were accused were guilty.

Belief in the powers of the devil was nearly universal in the seventeenth century. An interesting though not unusual example was cited in John Hale's Modest Inquiry into the Nature of Witchcraft. A man who was afflicted with visual hallucinations sent for a physician in a neighboring village. The physician was unable to come but sent his diagnosis and treatment by messenger. The diagnosis stated that the vapors ascending from the man's sore leg caused a water in his eyes, and distrubances in the brain which resulted in his seeing visions. To treat this disorder, the physician sent the patient an eye wash for his eyes and a cordial to take internally. Upon the use of these, the disturbance vanished in fifteen minutes. Regarding this Hale observed, "If a disease may do this, what may Satan, working upon bodily distempers and vapours, impose on the imagination (39)?"

In addition to the laws regarding witchcraft that involved the insane, during the seventeenth century in the Puritan colonies, there were laws regarding suicide that affected the insane. Suicide was a crime, and if the attempt failed, the individual was punished (40). Once the suicide was accomplished, however, it became necessary to hold an inquest to determine the state of the deceased's mind prior to his taking his own life. If it could be shown that the deceased had been distracted, Christian burial followed, and that was the end of the matter, but if the deceased was shown to have been of sound mind, Christian burial was denied and the Justice of the Peace issued an order for the disposal of the body. Samuel Sewall who served Suffolk County as Justice of the Peace at about 1700 usually commented on the outcome of such hearings in his Diary (41). On one occasion, when the jury returned a verdict that the deceased was of sound mind, Sewall ordered the body to be buried under the gallows on Boston Neck and to be covered with a load of rocks as a brand of infamy for passers-by to see (42).

To determine the state of mind for persons who were living (in contrast to the deceased discussed above) lunacy commissions were granted in much the same manner that they were issued by the Court of Chancery in England. Since the colonial courts varied from one colony to another, these writs were issued by one of the various courts in each colony: In Pennsylvania it was the Court of Chancery, In Massachusetts it was the Probate Court, and in Georgia it was the Court of Ordinary. In general, the process required a petition accompanied by affidavits in support of the allegation of lunacy requesting that the court issue a certificate. The petition to the court could be brought by any close relative of the alleged lunatic, by creditors, or by any person connected with him in a pecuniary interest, or by a civil contract (43). A petition presented in Massachusetts on July 25, 1676 was a variation of the usual procedure. In this case the petition was made by the Suffolk County court in order to assure the insane daughter of Thomas Pratt her fair share from her father's estate (44). In petitions presented to the Court of Chancery in Pennsylvania on August 13, 1726, one was presented by the creditors of William Dowell and the other by the father of one called Meredith (45). In Boston his creditors presented the petition against Israel Mills on February 14, 1737 (46).

If the affidavits were sufficient in the opinion of the court, a commission of from three to five persons was "directed to cause a jury to be summoned by the Sheriff of the county; with which the jury, the commissioners sit as a court; and hear the evidence adduced (43)."

The alleged lunatic and the persons who were to be charged with his care had to be notified of the date and time for the hearing so that they might appear to answer it (43). Apparently, in some of the colonies there had been some laxity in notifying the alleged lunatic of the time and place of his hearing; as a result, right after the Revolution, some of the states enacted specific statutes requiring that this notice be given. Such a statute was enacted in Massachusetts in 1783 and subsequently the State Supreme Court set aside some certificates of lunacy issued by the Colonial County Courts of Probate.[2]

In returning a ruling in a case of lunacy, the question before the court always had to be a specific ruling of either compos mentis or non compos mentis. One of sound intellect was capable of governing himself and managing his worldly concerns without assistance. One of unsound intellect was incapable of governing himself or managing his own affairs. It was not enough for the court to return a ruling of non compos mentis; it was necessary that the court add to the ruling that it was by reason of idiocy, lunacy, sickness, injury, immoderate use of alcohol, old age, or other specified cause (47). The Pennsylvania Court of Chancery (1726) in the cases cited above issued a "writ De Lunatico Inquirendo" in the case of Thomas Willing vs. William Dowell and a "writ De Ideota Inquirendo" in the case of Meredith vs. Meredith (48).

Once lunacy was established by the court and a certificate issued, it was necessary to appoint a committee to act as guardian. In some cases two committees were appointed--one to act as guardian for the person and another as guardian for the estate. It was customary to give custody of the person to the nearest of kin whenever possible--this might be a spouse, parent, son or daughter who had attained legal age. The fact that the guardian was referred to as a committee did not imply that two or three persons always had to be appointed. It was possible for one person to act as a committee. Anyone might make recommendations as to who the members of the committee were to be, but the choice was always up to the court. Ordinarily, aversion on the part of the insane person was deemed sufficient cause for not naming a specific individual for the committee. The specific functions of the committee might be to manage a business, provide for minor children, dispose of property, or bring suit for unpaid debts. In return for its services, the committee was allowed no compensation beyond its maintenance and, at least once a year, it was required to make an accounting to the court. Anyone having an interest in the estate of the insane person might demand an accounting from the committee at any time. Failure of the committee to satisfy the court in the presentation of its annual accounts was grounds for refusing to award the committee payment for services rendered (49).

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[2] Chase v. Hathaway, 14 Mass., 222.

Once an individual was ruled insane, he could not enter into written contracts. However, those contracts into which he had entered while sane were valid. All deeds and contracts made while insane were void. Debts which he had contracted before insanity were also good; but after insanity, only those debts contracted for necessities and approved by his "committee" were valid. Cooper pointed out one interesting sidelight with regard to the liability of the insane person for suit for debts he owed. In England he might be sued and imprisoned for debt, even though already ruled non compos mentis. This particular clause of English law, however, was not adopted in America (50).

The phenomenon of "lucid interval" appeared repeatedly in the literature after Hale's Pleas to the Crown became a standard reference and found its way into the rulings at common law in America. According to this belief, insane persons were subject to periods in which their reason returned, and they were completely sane. During these "lucid intervals" they could contract marriage or make wills (51).

Once insanity was established by law, the proof of recovery was the sole responsibility of the party so ajudged. "Non compos is entitled on recovery, to a supersedeas of the commission, but it must be applied for in his own name (52)." On August 6, 1686, Thomas Bowman, a lunatic, petitioned the Burlington Court in West New Jersey to have his "goods" returned to him. A jury was called and empanelled to determine if "hee the said Thomas [be] Capeable of Mannageing his owne affaires." The verdict of the jury was in the affirmative and the Court ordered Bowman's goods and concerns returned to him (53).

If a close relative felt that the alleged lunatic was being detained unjustly, he might appeal the ruling of the commission. On March 22, 1736/7, Sarah Watson of Savannah, Georgia petitioned the Trustees in London to secure the release of her husband, Joseph Watson. She complained that Mr. Causton, chief magistrate of Savannah and also one of the Trustees of the Colony, had imprisoned her husband for lunacy for two years without cause (54). On May 7, 1737, the Council ordered the magistrates of Savannah to make particular inquiry into the state of Watson's mind (55). Joseph Watson was released from his confinement for lunacy by order of the Trustees meeting in London on November 9, 1737, (56).

In Virginia, before a lunatic could be restored to his liberty and property, it was necessary that bond and security be posted for him. When William Coleman wanted his wife restored to him after she had been declared a lunatic and put under a committee by the County Court of Spotsylvania, it was necessary for him to post bond that assured the court of her good behavior and that she would not subsequently become a burden to the taxpayers, (57).

Summary and Conclusion

During the seventeenth and eighteenth centuries in colonial America, society's way of dealing with the mentally ill evolved from a number of informal, disorganized practices and procedures to more formal and orderly ones. Certain customs and usages were brought from England by the colonists; drawing upon these, the colonists dealt with each problem as it came up on an empirical basis. It was largely a question of dealing with the mentally ill person separate and apart from the problem of mental illness as a whole.

In terms of the development of western society's attitude toward the mentally ill, the seventeenth and eighteenth centuries were a part of the transition from the priestly-physician to the physician stage. As with any period of transition, ideas and trends are less sharply defined, and the lines of demarcation tend to be cloudy and blurred. The responsibility for the care and treatment of the mentally ill was divided among the clergy, the overseers of the poor, the courts, the physicians, and the family.

There are almost no instances of mental illness recorded before 1650 in the American colonies. This was probably due in no small part to the fact that in the process of migrating to America, some natural selection took place--the obviously mentally ill, as well as the physically ill, were left behind. There was no place in the business of settling the wilderness for persons who could not contribute to the labor force. Further, the nature of life in small widely separated communities where there was much physical labor to be done by both men and women made it possible to maintain the less disturbed mentally ill persons in the community. The incidence of mental illness does not necessarily increase as civilization develops, but changes in the way of life create situations in which the society is less able to tolerate deviant behavior--the necessity for the individual to conform to the prevailing mores and folkways becomes more urgent. Hence in the 1630's in New England, one who was regarded as "peculiar" might make a satisfactory farm laborer or fisherman, but by 1670 this same type of "peculiar" person might have encountered many more difficulties in towns like

Boston, New York, or Philadelphia when he sought to get a job in a shop.

The first mentally ill persons who demanded the attention of the colonists were the impotent (unable to work) and the destitute (the medically indigent). It was a simple matter to classify these persons as "impotent poor," and then make provision for them under the poor laws, and this is what happened. The more disturbed insane persons, however, made it necessary to provide some type of confinement to protect society from their dangerous acts. If the community was large enough to have some type of custodial institution--jail, poor-house, or work-house--the insane individual was confined there. In the absence of such institutions, the insane person might be remanded to the custody of the sheriff or other law enforcement officer who kept the individual in his home. Frequently some member of the family was ordered to keep the insane person in custody. When the insane person was a woman, it was usually left up to her husband to work out the mechanical means of keeping her in custody although in certain cases he could secure some financial assistance. When the insane person was a man who was regarded as potentially dangerous, resort was sometimes made to the construction of a small building adjacent to the family dwelling with the town contributing to the cost of construction.

The financial assistance provided under the poor laws was available only to those persons who were legal residents of the community. The settlement laws spelled out the conditions necessary to establish legal residence. To prevent undesirable persons, including the insane, from settling in the community where they might become a financial burden to the taxpayers, exclusion acts were passed in most of the colonies. These required "strangers" to post bond that they would not become financial burdens on the community, and those who were considered undesirable were "warned out" of town; the penalty for returning was usually a severe whipping.

Not all insane persons were objects of charity, although their inability to earn a living predisposed them to being indigent. For persons of means, it was necessary to make provision for their property, as well as for their persons. Much of the law that applied in these cases was drawn from English common law. It was necessary for the individual to be declared legally incompetent, _non compos mentis_, and then for the court to appoint guardians for his property and for this person. The exact court which handled lunacy cases varied from colony to colony, but the procedure tended to be uniform.

Insanity was entered as a plea for persons accused of crimes during the colonial period in a few instances. In determining the degree of insanity that would excuse guilt in a capital crime, Sir Matthew Hale's definition of legal insanity was used, i.e., if the individual did not have the intelligence of a fourteen year old child, he could not distinguish between good and evil and therefore could not be guilty of a crime. For the protection of society, however, it was necessary to keep the insane person in custody even though he had been acquitted; this was true in cases of murder and arson. Less serious offenders were pardoned or discharged, usually, in the custody of a relative who was expected to keep the offender from further misdeeds.

A logical adjunct to the insanity plea in criminal cases was the development of medical jurisprudence. The first real contribution to American medical jurisprudence was made by Thomas Cooper, a physician and judge in Pennsylvania, in his Tracts on Medical Jurisprudence. Benjamin Rush had been interested in the problem, but he never undertook the systematic study of it that Cooper did.

During the colonial period the belief in witchcraft had its effect on the mentally ill. There is no question that most of those persons who were involved in the apprehension and prosecution of those accused of witchcraft were sincere, but this did not prevent many mentally ill persons from being condemned as witches. It would be incorrect to assert that all of the accused were mentally ill, but enough information is still extant about some of them to illustrate delusional patterns which can be readily identified with mental illness. It would, however, be correct to say that some of the mentally ill in colonial America were punished as witches, and anyone who was mentally ill was in danger of being accused of being a witch.

Before mental illness could really be treated as a disease, many of the ideas and theories that prevailed during the seventeenth century had to be changed. This kind of change does not come about suddenly; it evolves gradually, almost imperceptibly over long spans of time. The association of disease with sin was an essential part of the Puritan ethic; indeed, in a very real sense, disease was not caused by sin, disease was sin. The association between diseases of the mind and sin was even greater than that between diseases of the body and sin. Roger Williams' letter to his wife, which is probably the first tract on mental illness written in America, illustrates this relationship. The soul and the mind called the "spirit" were one, and the well-being of the spirit was dependent upon the piety of the individual, nevertheless, many of Williams' principles were sound; self-examination, care in selecting one's companions, avoidance of excessive concern with material things, positive planning for the future, and acceptance of what could not be changed.

Cotton Mather's theory of disease was also built upon an etiology of sin, but it was, nevertheless, a systematic study of medicine at the end of the seventeenth century. He recognized two types of mental illness--hysteria and melancholy--and described the treatment of each. While the treatment was largely theological, Mather did suggest that certain empirical remedies were useful adjuncts. He recognized the futility of any regime in the treatment of mental illness if the patient was not an active participant in his own therapy. Mather's recommendations for kind treatment and hydrotherapy were well in advance of his contemporaries, but in a sense, Mather's Angel of Bethesda marked the end of an era because with the coming of the Enlightenment to America, the etiology of sin was replaced by theories built on rationalism.

The beginning of the Enlightenment in America is represented in the writings of Samuel Johnson, the first president of King's College. He was a profound thinker, stimulated by the writings of John Locke and George Berkeley, who began to describe the functions of the mind in terms of those faculties that could be observed (seeing, hearing, touching, smelling, and tasting.) He also developed the idea that man is a creature of choice. The concept of free will was more fully developed by Jonathan Edwards, and this was an important part of replacing the concept of sin as the cause of mental illness. Man, said Edwards, did only that which he really wanted to do; man was incapable of doing that which he did not will to do. With freedom of choice, man could be responsible for his own actions and had some choice as to the course he would take. If the doctrine of predestination had been carried to its ultimate conclusion, there could have been no trials for witchcraft in New England because it would have been recognized that God had determined who was to be possessed and who was not, and man could not be punished for something preordained by God.

Gradually the theories of the function of the mind moved away from the theological orientations of Williams and Mather toward the rationalism that underlay the work of Benjamin Rush. The ideas incorporated in the philosophy of Scottish realism were built upon the assumption of natural laws which governed the activities of the mind and which were discernible by man through observation and study. The mind ceased to be entirely synonymous with the soul, and the mind, and its functions became a fitting subject for scientific study. Under the influence of Scottish realism the mind tended to be associated more with the brain and less with the soul. The Scottish philosophers, Reid and Stewart, and their American disciples, Witherspoon and Smith, admitted only those functions of the mind that could be observed; the only source of information that could be trusted was that which man perceived through his senses. The senses provided the foundation for all of man's reasoning--without the senses, reasoning was a word without meaning.

As the ideas of the Englightenment spread, it became more and more apparent that if sin was not the primary cause of insanity, physicians must begin to look for natural causes to account for disorders of the mind. Early in the eighteenth century physicians in Europe, England in particular, began performing autopsies in an effort to determine the cause of insanity, but the results were disappointing. It was, they said, nearly impossible to demonstrate any real difference between the brain of one who had died of insanity and one who had died from some other disease. Nevertheless, some theories were advanced which identified insanity with structural changes in the brain. Benjamin Rush, the father of American psychiatry, developed his theory of the causes of diseases of the mind on "morbid and irregular" actions in the blood vessels of the brain. Rush said, "madness is a chronic form" of fever. These conclusions by Rush were not hastily arrived at. They were the result of careful observation and recording of the cases he treated at the Pennsylvania Hospital and in private practice over a period of more than twenty-five years.

The treatment that Rush employed for insanity was a combination of specific therapies and moral management. In the area of specific therapies, Rush made use of hydrotherapy, physical restraint in the form of the tranquilizing chair, blood-letting, restricted diet, and a variety of drugs. He also made use of coercion in order to secure and maintain command over the patient which he regarded as absolutely essential to the management of the case. Moral management, as it developed at the Pennsylvania Hospital under Rush's direction, included confinement of the patient in specially constructed rooms at the Hospital and thus depriving him of his liberty in a place other than his customary abode. To maintain control over the patient, Rush used seclusion, darkness, and solitude.

Between 1604 when Jamestown was settled and 1812 when Rush published *Medical Inquiries and Observations Upon the Diseases of the Mind*, a number of significant changes had come about in the care and treatment of mental illness. Specific statutes relating to the insane had largely replaced the individual legislative acts for specific cases. Procedures for lunacy trials had become more formal and more uniform. Sin was no longer regarded as the cause of mental illness and the treatment of the mentally ill had become, to a very large extent, the province of the physician. Rush's work moved the leadership in American medicine from Europe to the

United States. The trend toward institutional care had been established in three types of hospitals: general hospitals, private psychiatric hospitals, and state supported public hospitals. In general it can be said that these developments show colonial Americans sought to protect themselves from insane individuals, to protect the rights and property of insane persons, and to provide treatment for persons suffering from mental illness.

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BIBLIOGRAPHICAL ESSAY

The care and treatment of the mentally ill in America during the seventeenth and eighteenth centuries is largely an unexplored field; only two studies have been done which bear on the subject. The first was The Institutional Care of the Insane in the United States and Canada (4 vols., Baltimore, 1916) edited by Henry M. Hurd, which begins with the Pennsylvania Hospital in 1752; at best Hurd's treatment of the colonial period is superficial. The Mentally Ill in America (2nd edition, New York, 1949) by Albert Deutsch is a scholarly survey of the subject, based largely on sources and carefully documented, but only one chapter is devoted to the colonial period and much of this is devoted to witchcraft. The first edition of The Mentally Ill in America, financed by the American Foundation of Mental Hygiene, was published in 1937. It was a part of the literature that launched the mental hygiene movement of the mid-twentieth century, and this tends to be reflected in the evaluation of the colonial period.

The materials on the mentally ill are widely dispersed and are to be found in a variety of locations. The manuscript collections at the Massachusetts Historical Society contain some miscellaneous items bearing on the history of insanity, as do those at the Library of Congress and the Historical Society of Pennsylvania. The early records of the New York Hospital, the Pennsylvania Hospital, and the Williamsburg Hospital are preserved in the archives of the respective hospitals. The records of the Mayor's Court of New York City at the New York Historical Society contain several items pertaining to insane persons in New York between 1670 and 1770, some of which were cited in this study. The official records of local courts and municipalities were very useful in getting data regarding specific cases; some of those cited were: [New York] King's County Court and Road Records, 1692-1825 (Manuscripts at the King's County Hall of Records); Minutes of the General Court of Quarter Sessions of the Peace for the City and County of New York, 1683/4-1742/3 (Manuscripts at the Office of the Clerk of General Sessions, Criminal Courts Building, New York City); Minutes of the Westchester County General Sessions of the Peace, 1710-13 (Manuscripts in Westchester Deeds at the Westchester Hall of Records); and Suffolk County Records (Manuscripts at the Suffock County Court House in Boston).

The printed records of the various colonies contain the statutes that were applied to the insane both in general and in specific cases and the legislation relative to the founding of the Pennsylvania Hospital, the New York Hospital, and the Williamsburg Hospital. *An Alphabetical Digest of the Public Statute Law of South Carolina* (3 vols., Charleston, 1814) edited by Joseph Bevard; *The Colonial Records of the State of Georgia* (26 vols, Atlanta, 1904-1916) edited by Allen D. Candler; *A Manual of the Laws of North Carolina* (Raleigh, 1819) compiled by John Haywood; Massachusetts, Journals of the House of Representatives (26 vols., Cambridge, Mass., 1919); Laws of the State of New Jersey (Newark, 1800); The Colonial and State Records of North Carolina (30 vols., Goldsboro, N.C., 1885-1905); and the Public Records of the Colony of Connecticut (1636-1776) (15 vols., Hartford, 1850-1890) edited by J.H. Trumbull and C.J. Hoadley are some of those used for statutes relating to insanity and the insane. In addition the Statutes at Large of Pennsylvania from 1682 to 1801 (16 vols., Harrisburg, 1896-1908) edited by James T. Mitchell and Henry Flanders and the Colonial Records (16 vols., Harrisburg, 1851-1853) of Pennsylvania contain some of the early records of the Pennsylvania Hospital. The Colonial Laws of New York from the Year 1664 to the Revolution (5vols., Albany, 1894-1896) and Documents Relative to the Colonial History of the State of New York (10 vols., Albany, 1857) edited by E. B. O'Callaghan have some materials on the founding of the New York Hospital. Some of the records of the founding of the Williamsburg Hospital are in the Journals of the House of Burgesses of Virginia (13 vols., Richmond, 1905-1915) edited by H.R. McIlwaine and John Pendelton Kennedy and the Journals of the Council of State of Virginia (2 vols., Richmond, 1931-1932) edited by H. R. McIlwaine.

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1935) which contain only two references to mental illness in the five volumes.

The writings and papers of Cotton Mather contain material on witchcraft and much about mental illness in which Mather was interested. Some of the most useful were the Magnalia Christi Americana (2 vols., Hartford, 1855), The Wonders of the Invisible World (London, 1862), his Diary (vols. VII-VIII of ser. 7 of Massachusetts Historical Society, Collections, Boston, 1911-12) edited by Worthington C. Ford, and The Angel of Bethesda (in Ortho T. Beall and Richard H. Shryock, Cotton Mather; First Significant Figure in American Medicine, Baltimore, 1954). A number of other contemporaries contributed to the colonial theories regarding the mind: Roger Williams' Experiments of Spiritual Life and Health (edited by Winthrop S. Hudson, Philadelphia, 1951); William Brattle's Compendium logicae . . . (Boston, 1735); Thomas Clap's An Essay on the Nature and Foundation of Moral Virtue and Obligation (New Haven, 1765); Samuel Johnson's Elementa Philosophica in Samuel Johnson, President of King's College: His Career and Writings (edited by Carol and Herbert Schneider, 4 vols., New York, 1929); Jonathan Edwards' A Careful and Strict Enquiry into the modern prevailing Notions of the Freedom of Will which is supposed to be essential to Moral Agency (Boston, 1754); and John Witherspoon's Lectures on Moral Philosophy (Princeton, N.J., 1912).

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CRITIQUE

of

THE CARE OF THE MENTALLY ILL IN AMERICA, 1604-1812, IN THE THIRTEEN ORIGINAL COLONIES

TERESA E. CHRISTY, R.N., ED.D.

As you know, I have been asked to critique Dr. Blackmon's paper, The Care of the Mentally Ill in America, 1604-1812. But I thought it might be advantageous if I made a few preliminary remarks concerning the nature and value of history and the methodology of historical research by way of introduction. To my knowledge, this is the first study of an historical nature to be presented at one of these research conferences.

According to Henry Steele Commager, history is the past and everything that ever happened in the past. But since man cannot know all that happened in the past, it is with man's memory of the past that we must be concerned. Professor Commager says that "for a people to be without history, or to be ignorant of history is as for a man to be without memory--condemned forever to make the same discoveries that have been made in the past, invent the same techniques, wrestle with the same problems, commit the same errors; and condemned, too, to forfeit the rich pleasures of recollection (1)."

Indeed, in The Meaning of History and Other Historical Pieces, Frederick Harrison, another historian says:

> Suppose that all knowledge of the gradual steps of civilization, of the slow process of perfecting the arts of life and the natural sciences, were blotted out; suppose all memory of the efforts and struggles of earlier generations, and of the deeds of great men, were gone; all the landmarks of history; all that has distinguished each country, race or city in past times from others; all notion of what man had done or could do; of his many failures, of his successes, of his hopes; suppose for a moment all the books, all the traditions, all the buildings of past ages to vanish off the face of the earth, and with them the institutions of society . . . suppose a race of men, by a paralytic stroke of fate, had suddenly been deadened to every recollection, to whom the whole world was new. Can we imagine a condition of such utter helplessness, confusion, and misery (2)?

This is, of course, an all encompassing view of the totality of history, as a total record of the past. And this is the general ideal of history--to explain the whole development of civilization. This is probably unattainable, but by tracing the development of various isolated segments, such as the history of an individual, of a nation, of government, of education, of an institution, of mental illness, we can get the parts to make the whole.

History is man's memory--his organized memory, and the organization is equally important, for first and foremost, history must tell a story. Lord Macaulay once wrote, "the art of history is the art of narration, the art of interesting the affections and presenting pictures to the imagination . . . by skillful selection and dispostion without indulging in the license of invention (3)." This story must be a record consisting of three processes so skillfully blended as to appear as one.

The first process is the collection of what are thought to be relevant facts. This is the historian's first problem: Which facts are relevant? The second process is the organization of these facts into some coherent pattern, and the third, there must be interpretation of the facts and the pattern. These three things account for the varieties of history, as different historians find varied relevancies, patterns, and interpretations.

"There are as many kinds of history as there are historians, and each historian writes his own kind of history (4)." But over the centuries, there have developed only five or six basic interpretations of what makes men do what they do in universal history. Let us very briefly consider these so-called universal interpretations of history.

First, the "Great Man" or biographical interpretation. This stresses the "hero in history" and indicates that change was brought about by individual men or women. It sometimes is known as the genetic interpretation of history, for it implies that exactly the right man, with his special talents and abilities, was in the right place at the right time and affected the course of events. Others regard this as a "chance" interpretation, for it was just "chance" that such a man appeared at the opportune time.

Second, there is the religious interpretation implying that change comes from God through man. It teaches history through a "rise and fall of man," and is deterministic by stressing destiny rather than chance. Certainly Dr. Blackmon's study shows some evidence of this in the discussion of the religious fervor affecting the community during the Salem witchcraft trials.

Thirdly, we have the political or intellectual interpretation, indicating that political forces or ideas rather than heroes or religion effect change. This interpretation is familiar to all of us who have studied American history as a succession of wars and political campaigns.

The fourth is an economic interpretation indicating that economics are basic to all human motives. This is commonly seen in Marxist writings concerning the rise of the proletariat.

Fifth, we find the psychologic interpretation stressing not the rational elements observed by man but the emotions of man. Thus we see the interpretation of a main cause of our Civil War being the emotional disparity and hatred of the Northern abolitionists for the Southern slave-owners.

And finally, we have the scientific interpretation--which is really a "no-interpretation interpretation." It is a method, really, of merely presenting the facts and allowing the reader to interpret for himself.

Clearly, as any researcher in the behavioral sciences knows, history is not a science in the sense that chemistry and biology are. It cannot submit its data to scientific experiments; it cannot repeat its own experiments; it cannot control its materials. But history does aspire to use a scientific method. That is, it tests all things which can be tested, and holds fast to what it finds to be true. This is what is called "the historical method."

In brief, the historical method consists of three elements, external criticism, internal criticism, and synthesis. The first, external criticism, concerns itself with the validity of the evidence. Is this primary source, this document, this letter, this record, what it purports to be--or is it a fraud? Once the historian is sure that is is valid, he applies internal criticism. Is it reliable? What does the source say? What does he mean? Words change or vary in meaning from one period of time to another, and the historian must exercise judgement and caution. And finally, the historian must synthesize, developing his narrative and weaving his facts together. It is said that this is the most difficult part, for he must stitch his notes together, as the pieces of a patchwork quilt--but the stitches must not show.

And now, with this brief background concluded, I should like to begin discussion of the study in question. First let me say, however, that my criticisms, both pro and con, are in part, reflections of my own personal preferences, evolving from my own study of historical method and my own personal research. As I said earlier there are as many kinds of history as there are historians.

When one reads history for pleasure, the footnotes and bibliography tend to be ignored. When another historian reads history, these two elements of scholarship are carefully scrutinized. I found Dr. Blackmon's bibliographic essay, at the conclusion of her paper, to be most enlightening and most helpful. It was carefully done, and gives the reader specific comments on the various sources used. I am sure that this compilation would be of great benefit to future scholars attempting research on this topic and time period.

I was not always as pleased with the footnotes. I kept hoping that perhaps an anecdotal footnote would be provided here or there to give further detail on an incident or person mentioned in the text. It might just be my indefatigable curiosity, but I kept wondering if there was any further information on some of these people. For example, on page 73 of Dr. Blackmon's study, we learn of the case of Lydia Wardwell who was accused of going into the Newbury Meetinghouse in the nude. Now I just had to smile to myself at the thought of anyone walking into a meetinghouse in the nude in 1663! Dr. Blackmon does tell us that she was sentenced to be severely whipped--but is that all? Was there no information available as to what became of her? I realize fully that Dr. Blackmon's point was to indicate that physical punishment was meted out for deviant behavior. But was Lydia Wardwell mentally ill? Was she locked up or treated? Was there any further information?

This was true also of the schoolmaster, Mr. Holt, on pages 75-76. His behavior was described as being "pretty bad," though we do not know what that means. We are also told that the distracted Mr. Holt was offered the opportunity to remain in the state of Georgia or return to England. But we are not told what happened

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to him. Did he go or stay? Were there any further clues as to what eventually occured? Was he insane?

This may be of no consequence to anyone and may be indicative of my own style of writing history. I never like to leave a question in the reader's mind, if I can possibly find or offer an answer. I therefore use anecdotal footnotes extensively when it is inadvisable or inopportune to supply additional information in the text. Again, this may be personal preference, though I do feel it adds markedly to telling a good story. And we have said that history must tell a story.

Dr. Blackmon's brief butconcise coverage of the witch hunt in New England is well done and most interesting. She cites cases and offers possible explanations as to symptomatology suggestive of mental illness rather than witchcraft. For example, the case of Hugh Parsons and his wife on pages 81-82. Though they were originally acquitted of witchcraft in 1651, Mrs. Parsons was subsequently executed for murdering her baby. Dr. Blackmon offers the possibility of postpartum psychosis, certainly a plausible explanation in light of modern knowledge.

And in the next paragraph Dr. Blackmon delights me with a bit of William Penn's wry humor. In 1684 Margaret Matson had been brought to trial because she confessed to riding through the air on a broomstick. Penn dismissed the case because he knew of no law against such a means of locomotion! And the verdict set a precedent which ended criminal prosecutions for witchcraft in Pennsylvania!

Dr. Blackmon's brief but pungent description of the Salem witchhunt is also very good. The group of young girls who, elated with the attention they received, were responsible for the fact that 250 persons were arrested and tried on witchcraft charges in one year, has parallels in contemporary life, where elders can be unsettled by the accusations of the young. Dr. Blackmon describes the spreading hysteria quite graphically, and we have no reason to question her sources since this is a well-documented period of American history.

In Dr. Blackmon's conclusions we find emerging a framework for the interpretation she utilized in her study of the mentally ill. I would see this as use of the political or intellectual concept, for it is through the study of the laws and court cases that the treatment--or lack of treatment--of the mentally ill is described and adduced. She tells us that the first mentally ill persons who demanded the attention of the colonists were those unable to work and the destitute or medically indigent. Provisions were made for these persons under the "Poor Laws," while the more disturbed insane persons necessitated some type of confinement to protect society from their dangerous acts. In the larger communities, jails, poorhouses, or workhouses were used for custody of these individuals, by order of the court.

Then, we find the religious interpretation entering since the association of disease with sin was an essential part of the Puritan ethic, and the relationship between diseases of the mind and sin was even greater than that between diseases of the body and sin. Indeed, religiosity was a dominant theme in Puritan New England and most historians concede that the events of this period must be viewed with consideration of these beliefs.

And as we move to the final pages we find a bit of the "Great Man" interpretation as Dr. Blackmon describes the activities and ideas of men like Cotton Mather, Samuel Johnson, Jonathan Edwards, and Benjamin Rush. By the time Rush published his Medical Inquiries and Observations Upon the Diseases of the Mind in 1812, Dr. Blackmon informs us that sin was no longer regarded as the cause of mental illness and the treatment of the mentally ill had become the province of the physician.

In summation, I would like to say that I found this study to be a definite contribution to the general history of Colonial America. I also believe that it adds to that which is known of medical history, as well as the history of law, prior to the 19th century.

But I couldn't help wondering as I prepared this critique for the Fourth Nursing Research Conference, sponsored by the ANA, just what was its specific contribution to history of nursing?

I mean nothing personal against Dr. Blackmon, but I wondered, when we need so much in the way of historical research in nursing, why so competent a historian chose to do something outside of nursing per se. Our need for good biographies is acute--of Isabel Hampton Robb, M. Adelaide Nutting, Lavinia Dock, Isabel M. Stewart. We have only one good history of American nursing--and that, by its title, is one interpretation.

I would like to say, therefore, in conclusion, that since our need is so great, and the number of nursing historians so few, that should Dr. Blackmon pursue further research she consider some of the areas in nursing which so definitely need study.

* * *

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4. Ibid., p. 15.

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SUMMARY

of

GENERAL DISCUSSION

The methodology of historical research and other forms of research, were compared. It was suggested that historical research, like other research, has often been carried out within a specific conceptual framework, for example, a sociological framework. Also, at times history has been written with a particular purpose in mind, as for example some of that written in totalitarian countries, and even some written in our own country. Dr. Blackmon's historical framework consisted in that of the laws which she deduced would provide her with the most data about mental illness during the period under study.

It was generally agreed that nursing history has not always shown the relationships between social forces and events. It was suggested that nursing in this country should be studied in terms of its relation to wars, to the financial status of the country, to the status of women, etc. Several ongoing studies at Teachers College were reported, e.g., one on "General Higher Education of Women and Education for Nursing--Development and Interrelationships in the United States from 1870 to 1900," and another on "The Origin and Development of Professional Licensure in Nursing."

In its efforts at scientific objectivity, historical research is also moving toward the use of modern technology, such as computer techniques. Some Europeans go so far as to claim a science of history and to attempt a very scientific approach. American historians are moving away from this approach and believe that it is very difficult to be completely objective because the personality of the historian will, to a certain extent, enter the data. However, this is not to say that the historian does not attempt to use as scientific an approach as possible. Perhaps, it is that the levels of precision in different kinds of research are different.

The question of the nature of evidence and the criteria of plausibility used was briefly discussed. Dr. Blackmon pointed out that laws and records of court cases were selected because she had considered them to be accurate as well as fruitful sources of data on the subject selected. She stated that personal diaries and letters were not as good as sources as she had hoped they would be. On the other hand, the writings of some persons, such as Cotton Mather, were particularly helpful. Other less fruitful areas were also explored and later dropped; however, even these were helpful in understanding the period. As to how the decision is made to stop, one simply reads as much of the relevant material as one can and then decides on how much of it is truly significant.

Primary sources are checked against each other to attempt to get as much accuracy as possible. No historian ever reports something as a fact unless he has two corroborating primary sources, or a sufficient number of reliable secondary sources all stating the same thing. The question of fraud arises when there is some question about whether a primary source was in truth an original document or a copy made later. The further one gets from the primary source the more possibility there is of error in working with old documents. One can consider a fact possible or probable when one has one primary source and a second primary source that does not corroborate the fact but leads one to believe the first is accurate, or when there are several secondary sources corroborating the primary source.

In recent years much more has been done with oral history. This type of history gives one the flavor of the personality of the individual. However, its major limitation lies in the memory of the narrator. Thus, oral history, will also have to be scrupulously corroborated with regard to the facts given.

In reply to a suggestion about the possible use of the Historical Unit of the Army for data about mental illness during the colonial period, Dr. Blackmon stated she had planned to use this source for the purpose of writing a history of nursing care during the American Revolution. She plans to do this history in connection with the anniversary celebration of the American Revolution.

Two generalizations made in Dr. Blackmon's paper were questioned: 1) "By sanctioning witchcraft, the church indirectly directed the attention of man from the study of mental illness," and 2) "The witch-hunt in Europe was started by the Catholic Church during the thirteenth Century." Dr. Blackmon pointed out that these statements were based primarily on a secondary source since most of the primary source material that has to do with this is still in Europe, some of it only in the original Latin. Therefore, the statements should not be accepted as wholeheartedly as if they were based on primary sources. She agreed that both sides of the story are still needed and reported that there is work going on now, in celebration of the anniversary of the Reformation, which should bring more light on the subject of witchcraft.

Dr. Blackmon suggested that even with the question of witchcraft in the colonial period one is dealing primarily with secondary sources. The original documents and transcripts of the witchcraft trials mysteriously disappeared sometime between 50 and 100 years ago. It is not known if they were destroyed or hidden.

Can history help us predict the future? Dr. Christy quoted George Santayana who said, "He who does not know history is condemned to repeat it." She suggested that if one looks at the nursing history of the past 60 years, one will see much repetition. Both Drs. Blackmon and Christy agreed, however, that the historian stays away from making predictions and Dr. Blackmon pointed to the Toynbee theory of history which sees the progress of civilization as a wheel that is not round, going up an inclined plane--a theory which accounts for the cycles of history.

* * *

OLDER PATIENTS AND THEIR CARE:
INTERACTION WITH
FAMILIES AND PUBLIC HEALTH NURSES

Mary Adams, R.N., Ph.D.

An ubiquitious phrase in the health professions is that "patients have families (1)." The nursing practitioner incorporates this expression into her behavior, but she seldom penetrates the real meaning it has for her patient, his family, and her practice. The phrase implies that the patient has a family present and caring. Behavioral scientists point out that "details on the nature and effort by family members in 'caring for their own' are largely a mystery (2)."

Nurses--public health nurses in particular--have a real world of work experience from which to illuminate the mystery cited in behavioral science literature. But these experiences are seldom subject to scientific exploration.

The present paper is based on a study of public health nurses and aging-chronically ill persons. Its purpose is three-fold: 1) to discuss the experimental design in the study of effectiveness of public health nursing care; 2) to describe stability of family interaction and assistance patterns following discharge of aging patients from a chronic illness and rehabilitation hospital; and 3) to raise questions about family interaction and assistance patterns and frequency of public health nurse visits.

The data for the paper are drawn from the Continued Care Study by Nurses and Doctors: An Experiment.[1] It is a two-year controlled study to examine selected physical, social, and psychological differences in patient groups some of which received public health nursing care for two years, and some of which did not receive this care.

The rationale for this research reflects recent dramatic changes in the population structure of the United States and the resulting impact on health services. These changes are the upsurging number of aging persons over the past few decades; a keener awareness of the chronic illness and disability that accompanies aging; and the consequences for the health care system in serving members of the segment of this population which remains in the community.

The increasing demographic weight of older persons--10% of the nation's 200,000,000 citizens--has created a concomitant shift in demands for more health and preventive illness care. "Between the ages of 45 and 64, chronic conditions are present in 61.3 per cent and limitations of activity in 18.3 per cent. From 65 years and over, chronic disorders advance to 78.7 per cent and disability to 45.1 per cent (3)."

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[1] This study was supported in part by grants from the United States Public Health Service to Case Western Reserve University School of Medicine, including NU00067, Continued Care by Nurses and Doctors: An Experiment; HD00669, Interdisciplinary Program in Aging Research; and GM12302, National Institute of General Medical Science.

The vast majority of aging and chronically ill persons live in the community even though many are dependent on others for physical and homemaking services. A recent national survey of persons 65 years of age and over living in the community concluded that eight per cent is either bedfast or house confined (3). Interestingly, only about five per cent of those 65 years of age and over is institutionalized.

In the midst of new health and welfare programming for the aged, the need for evaluating existing fragmented community services is paramount. Because of lack of coordination among many agencies, their influence on the patient and his family is splattered. An earlier study of public health nursing of elderly rehabilitation patients concluded, "Within the present structure of community services there are insufficient means to sustain individuals through periods of stress. As a result many are unnecessarily patients in hospitals or other long-term institutional settings (4)." Other studies support this finding by stating that problems associated with family and illness are left often to the individuals concerned to resolve (5, 6).

Public health nursing plays a key role in the home care of the chronically ill. A decade ago the Commission on Chronic Illness suggested that it is perhaps the most important service to a successful program of home care (7). Further, public health nurses are unique in their knowledge of older persons. "No professional group sees more of the health needs and problems and more of the total living situation of our older citizens (8)."

It was logical, therefore, to base the Continued Care Study on the premise that patients discharged from a chronic illness rehabilitation hospital would maintain or increase their rehabilitative benefit gained in the hospital through the coordinating and therapeutic skills of public health nurses. The aim of the project was to subject the following hypothesis to experimental test:

> After discharge from a chronic disease rehabilitation hospital, patients whose care is regularly supervised in the home by a public health nurse (working with the patient's physician) will more often maintain or increase physical, psychological, and social function than will patients whose care is not so supervised.

Methodology

The project was a two-year, prospective-longitudinal study. The public health nursing program was designated as the independent variable with patients' physical, psychological, and social functioning as the dependent variable. The experimental or treatment variable was two years of public health nursing care for those study patients randomly assigned for service.

The sample consisted of 300 patients discharged from a 66-bed chronic illness rehabilitation hospital which is part of a non-tax supported university medical center. After hospital discharge, medical supervision of the patients returned to private physicians or clinics in other hospitals.

The design selected for the study was the classical four-cell experiment. (See Exhibit 1) The experimental design is appropriate for determining the probable relationship between treatment input (that is, regular public health nurse visits) and outcome. Change in patient functions was measured at intake and at termination. Comparison of outcome between the nurse and non-nurse groups constituted the demonstration of program effectiveness. The criteria of public health nursing effectiveness were the maintenance, deterioration, or improvement of such patient functions as self-care and walking, mental orientation, use of medical resources and interactions with family members, friends, and social groups (9).

Exhibit 1 - The experimental design in the Continued Care Study

	Public Health Nursing Referral (N_1)	No Public Health Nursing Referral (N_0)	Total
Non-nurse observations: Intake and Termination (O_o)	N_1O_o (N=75)	N_oO_o (N=75)	150
Non-nurse observations: Intake and Terminal and 3 Months Intervals (O_1)	N_1O_1 (N=75)	N_oO_1 (N=75)	150
Total	150	150	N=300

At the time of hospital discharge, patients eligible for the study's sample were assigned by a method of randomization to one of four groups of 75 members each. The four cells differed according to the type of public health nurse assignment and the frequency of non-nurse observations during the two years of study as follows:

Public Health Nursing Care and Concomitant Non-Nurse Observation (N_1O_1)

Care: regular public health nursing visits for two years

Observation: (a) at intake and termination of the study
(b) every three months for two years

Public Health Nursing Care Group (N_1O_o)

Care: regular public health nurse visits for two years

Observation: at intake and termination of the study

Concomitant Control Group (N_oO_1)

Care: no public health nurse visits by study design

Observation: (a) at intake and termination of the study
(b) every three months for two years

Terminal Control Group (N_oO_o)

Care: no public health nurse visits (by study design)

Observation: at intake and at termination of the study

Four cells in the experimental design were used to control for non-nurse observer versus public health nurse effect on patient function. Both public health nurses and observers made regular home visits. The observers functioned separately from the nurses; by study organization there was no communication between them. Not until the first home visit did the observer know whether the patient she was seeing had been assigned a visiting nurse. This information was elicited through a question in the interview schedule.

Since observer interviews were focused on patient welfare and health status, differences in patient functions in the public health nurse and observer interval groups might have been obscured without the four-cell design. The same observer interviewed the same patients at hospital intake and at the three-month intervals. The observer reinforced her original identification with the hospital by saying when initiating interval contracts, "I'm calling from the hospital to see how you are getting along." At each three-month contact, she asked her patient such questions as how he was managing his walking and toileting, how long it had been since he had contact with his physician, dentist, chiropodist, and how often he was seeing his children or friends. Although the interview schedules were standard and nearly the same for each observation, the questioning of a respondent was informal. The observer did not fill out her forms in his presence. The average interview lasted an hour to an hour and a half.

Three women comprised the observer team. One was a sociologist and two were former nurses. They stayed with the study throughout the entire evaluation period of nearly four years. All of these women had had experience previously at the same hospital in interviewing other disabled and chronically ill patients after hospital discharge.

The observer team was directed by a nurse with a doctorate in sociology. She had had prior experience in public health nursing, including teaching. Her ongoing supervision of the observers was conducted through individual conferences and in group sessions which sometimes included the project director and other members of the project staff.

The focus of the director and observer team interactions was on problem patients and on clarifications of definition of terms. Among the observers there was opportunity for exchange and feedback on information gathering in the interview process and techniques for dealing with unanticipated responses.

It is important to emphasize that the interviewers in this study figuratively walked a tight-rope. On the one hand, they became very sensitive to how the aging and chronically ill managed in the community. They became people whose visits were anticipated by the patients. Yet, in terms of the goals of the study, the interviewers were prohibited from offering suggestions or responding to pleas from the patients and family members for assistance in physical or homemaking care.

The randomization process in the study will be discussed next, followed by a description of the public health nursing care program.

Eligible for admission into the study were those patients who were 50 years or over, had been in the hospital for six days, and were to be discharged to a private home within the visiting nurse area. All who met these criteria within the intake period (22 months) became part of the study population, with no restrictions due to the diagnoses nor the length of time of the disabling illnesses. This meant that some persons with limited or minor disabilities as well as some severely disabled people became part of the sample of 300.

This number was selected in order to have a sufficiently large sample size at study termination. Attrition was anticipated through death (estimated at 20%) and other possible loss of contact. Also included, of course, were those patients who might refuse public health nurse visits and interviewer observations from the beginning.

In order to make the study design more rigorous, a randomization scheme was developed for patient group assignment. Its goal was to distribute patient differences evenly between the four subsamples. Before the first patient was admitted to the Continued Care Study the randomization assignments had been set up by a statistician. Each study number in the desired sample size had been assigned two random numbers. The first indicated which of the three observers would do the intake interview and the second number placed each patient into one of the four study cells.

Timing for intake interviews and the assignments of patients to the four experimental groups were controlled by the study's intake worker. She performed as part of the hospital staff with free access to patient information. She was apprised of all hospital admissions and kept close surveillance on discharge plans of those patients who had met the sampling criteria. When a patient was within ten days of his tentative discharge date, she notified the project secretary of a new patient for intake. She reported later on each patient three days prior to his date of actual discharge. He was then ready for assignment to the public health nurse or non-nurse groups.

The numbers for each prospective respondent (patient number 001 to 300) had been stamped on a sealed envelope; within each of these was a second envelope. The outside of the second envelope had imprinted on it the observer number so that the study secretary notified each appropriate interviewer about which patient she was to see. The latter proceeded with her entire hospital evaluation prior to the disclosure of the second random number which indicated patient assignment to one of the four cells.

The second random number was never revealed until the intake worker had apprised the secretary of the patient's imminent discharge. With the disclosure of the second random number, the observers then told those patients whom they were to follow into their homes that they would be coming to visit them. Likewise, the project director, a physician, informed those patients who, by study design, were to be referred to the public health nursing service. The Visiting Nurse Association of Cleveland was the nursing agency which participated in the study.

No special program of care was instituted for the research patients within the nursing agency. The administration of their care was essentially the same as that for other patients. However, only selected nurses within the agency carried study patients. Thirty-seven nurses initiated the first home contacts. Thirty-four of these held at least a bachelors degree. At the time of assignment to study patients, the nurses' tenure in the agency ranged from three months to 26 years, with a median of 18 months (10). Supervision of these nurses was maintained without deviation from customary agency practice. The project provided a nurse coordinator in the agency who served as a liason between the investigators and agency personnel.

There were two major differences in the nature of study patient referrals from those of the usual referrals made to the visiting nurses participating in the study. The first was that patients had been referred at random without regard to assessment by hospital personnel of their need for follow-up care in the home. Some patients and families already had made special plans for the patient's care at home, such as employing a practical nurse or homemaker, without considering the use of a public health nurse.

The second difference in patient referrals was that the patients were to be followed, if possible, for two years, regardless of their level of improvement. The arbitrary minimum frequency of nursing visits identified by the investigators as desirable for research study was a three-week interval between visits during the first year and six-week intervals for the second year. There was no maximum number of visits designated. A few patients with a high level of physical independence questioned the need for the nurses to continue visiting.

Nurses kept special records of the study patients. These records consisted of the nursing activity for each visit in such areas of care as rehabilitative exercises, prescribed treatments, health promotion, planning and coordination, and an area defined as "psycho-social." In addition, nurses wrote descriptive notes on each patient and family. Semiannual summaries were written also. Analysis of these data is currently in process.

Some Problems of Design

The application of the experimental design in the study of effectiveness of health services has its serious limitations. After reviewing the use of the design for this purpose, Kelman concludes that there exists "a gap between the methodological sophistication of these studies and their saliency for clinical practice (11)." Kelman argues that, unless certain requirements are met by the researcher in the study of effectiveness of long-term care, the clinical relevance of his findings is weakened. Two of these requirements are particularly pertinent to the Continued Care Study in demonstrating the effectiveness of public health nursing in the care of the aging and chronically ill. The first is that "the populations to be altered by treatment be homogeneous with respect to its presumed changeability"; and the second is that "the experimental or treatment program be different in some critical way from the comparison or 'non-treatment' program (11)."

His first requirement in this research was met partially by the randomization of respondents to treatment and non-treatment groups. This established comparability of selected characteristics. But, homogeneity in relation to the possibility of changes due to public health nursing intervention was not isolated. Even though measures which are predictive of patient changeability were lacking, it was assumed in this study that an older patient population discharged home from a chronic illness and rehabilitation hospital would have a probable need for public health nursing care. The question of homogeneity disintegrated with fluctuation in patient acceptance. Some patients felt a need for a nurse and readily accepted the service in contrast to those who saw no necessity for nursing visits. There were also physically handicapped persons whose progressive deterioration advanced relentlessly in spite of nursing intervention. Differences in referred study patients were further compounded by depressions, individual variability in the will to improve, and family responses, both to the patient and to the nurse.

The second requirement for demonstrating treatment effectiveness would have meant a thorough description of patient care differences between the experimental and control groups. The random assignment that the treatment group would have public health nursing care and that the control group would not was not precise enough to indicate the care differences between the two groups. It was not sensitive enough to variation within public health nursing visits, nor did it isolate other sources and use of care in either the experimental or control groups.

Since care is an interpretative concept, the usual measurement of treatment effectiveness is the maintenance, gain or loss in physical, social, and psychological functions (12). The results obtained, according to Kelman, yield more of stability of attributes within patient populations than of the influence of treatment programs (11).

Advantages do stem from the application of the experimental design in the study of nursing care for patients with long-term illness. By categorizing attributes, generalizations evolve about patients. These generalizations invite questioning of their significance for nursing service.

Randomization was effective in the Continued Care Study sample because characteristics were equally distributed among the four experimental groups at intake. Several examples affirm the comparability, such as ages of patients, mental orientation test, and walking. (Table 1) The mean ages within the four experimental groups were 71.1, 72.1, 73.6, 71.3. Orientation scores and walking

Table 1

Comparability of selected characteristics
of four randomized patient groups at study intake

		Public Health Nursing Care Groups		No Public Health Nursing Care Groups		
Characteristics		N_1O_1 (N=75)	N_1O_o (N=75)	N_oO_1 (N=75)	N_oO_o (N=75)	Total
Age at admission to study	mean	71.1	72.1	73.6	71.3	72.0
	s.d.	9.7	10.3	8.4	10.3	9.7
	total	75	75	75	75	300
Age at death of spouse	mean	62.8	56.4	62.3	63.0	61.3
	s.d.	11.6	12.8	13.3	12.1	12.6
	N	30	26	36	26	118
	not applicable	45	49	39	49	182
	total	75	75	75	75	300
Hospital length of stay in days	mean	38.4	34.2	37.9	32.1	35.6
	s.d.	21.5	18.0	27.9	16.2	21.4
	total	75	75	75	75	300
Orientation scores: test for time, place and person (range from low to high--0-18)	Scores:					
	0-6	3	2	3	3	11
	7-12	7	5	11	12	35
	13-18	61	66	60	57	244
	not tested	4	2	1	3	10
	total	75	75	75	75	300
Walking Status:						
Walks independently with or without mechanical aid		23	17	20	23	83
Walks with personal assistance, or not walking		52	58	55	52	217
	total	75	75	75	75	300

status evaluations were markedly similar. The majority in each subsample was well oriented, but less than one-third entered the study with independent walking level.

In the total sample of 300 patients, there were twice as many women as men. Cerebral infarction was the major diagnosis leading to hospitalization for one-fourth of the patients, while one-fifth had hip fractures. Two hundred eighty-seven of the 300 were financially independent of any agency assistance at intake. About one-seventh were working until their current hospitalization.

In any prospective-longitudinal study attrition is a major problem. Inevitably, sample loss occurs through deaths, moves, and other break-offs of contact, such as an unwillingness to continue in a study. This experimental design, as others with human subjects, is rendered quasi-experimental as a result of erosion of its original sample of active subjects.

In terms of the study's goals, only 43 per cent or 64 of the patients referred at random for public health nursing care reached the optimum two-year follow-up. Attrition from service among the remaining patients is presented in Table 2. By the end of the two years, 48 had died; 14 were in nursing homes and 24 were living in the community but not receiving care.

The figures in Table 2, while demonstrating accurately the active versus the attrition groups, did not express the nurse-patient-family involvement until termination of visits within attrition groups. A closer appraisal of these reveals that 83 per cent of the patients who had died or who had been placed in nursing homes had received continuous nursing care until one or the other event precipitated case closure.

Table 2

Attrition from public health nursing care
among 150 patients referred at random
at termination of the two-year study

Attrition groups at termination of two year study period	Number	Percent
Active	64	42.6
Deceased	48	32.0
Nursing home placements	14	9.3
Living in community without public health nursing care	24	16.0
Total	150	99.9

Selected Study Findings

It is of prime importance that nurses have knowledge of and are sensitive to characteristics of patients and their families who use nursing service. Data from the present study population of older and chronically ill persons offer a rich opportunity to explore them in relation to public health nursing care.

Household composition is a tangible indicator of potential social relations of the aged. It acquires crucial meaning in this study when one considers the prevalence of house confinement among the disabled. It points to possible sources of help for patients in their homes. Furthermore, household composition signifies for the nurse potential combinations of interactions into which she enters as she crosses the thresholds of the homes of the referred patients.

Table 3

Patients' household composition
at intake and termination
of the Continued Care Study

Household Composition	Intake		Termination	
	Number (300)	Percent	Number (177)	Percent
Alone	85	28.3	47	26.5
2 members	111	37.0	70	39.5
3 members	51	17.0	31	17.5
4 or more members	53	19.6	29	16.3
Nursing home	--	----	36	12.0
Expired	--	----	87	29.0
Total	300	99.9	300	99.8

At intake 111 of the 300 patients were living in two-member households; 85 were living alone; and nearly equal numbers were living in three-member or in four and more member households. (Table 3) A similar distribution was present for the study subjects still living in the community at terminal (N=177).

A general demographic fact in the United States is that men 50 years of age and over are more apt to be married than women patients. Nearly 70 percent of the 98 men at admission into the study had wives, while only about 15 percent of the 202 women had husbands. Furthermore, among married patients the men were older than the women. The two-member households illustrate this point. Of patients living with spouses only four percent of the women in contrast to 40 percent of the men were 75 years of age and over.

Household composition of the large number of women without spouses in the sample represents the varying noninstitutional living arrangements of aging people in today's society. The largest percentage of the 202 women studied, 35 percent, lived alone, and two of five of these who lived independently were 75 years of age and over. Twenty-seven percent lived with a child. The ratio of women living with children doubled when they became 75 years of age or older. The remaining women lived with relatives or nonrelated persons.

Two other findings about the household composition of the study patients hold implications for health workers serving an aged person and his family. If the aged person is living with a child, the child is most likely to be a married daughter. Over one-fourth (23 percent) of the study patients lived with children. Among the adult children there were as many single sons as single daughters, but only one-sixth as many married sons as married daughters.

In the two-year period, there were many changes in household membership in homes of patients. These resulted from such events as deaths of spouses, marriages of children, moves to boarding homes, employment of homemakers, and deaths of patients' parents.

Among the 64 patients remaining active with the public health nurse service, there were 21 such shifts in household composition with a resulting fluctuation on patients' social relationships,

Table 4

Household composition
for patients remaining active with the public health nurses
for two years in Continued Care Study

Household Composition	Intake Number (64)	Percent	Termination Number (64)	Percent
Alone	16	25.0	12	18.7
2 members	25	39.0	31	48.4
3 members	13	20.3	14	21.8
4 or more members	10	15.6	7	10.9
Total	64	99.9	64	99.8

usually diminishing rather than increasing their social networks. Furthermore, among patients who became inactive due to nursing home placement, loss of spouse precipitated the change to a more dependent environment. (Table 4)

A debated question is the impact of an elderly family member with disabling chronic illness upon family relations. The question is: Does a long-term disabling illness have a disruptive effect upon family relations established prior to the illness, or does it not? In this report, family relations is defined as face-to-face interaction between the patients in the sample and their children. Over one-third of the study patients did not have children. (Table 5) At intake, 84 percent of the 192 patients with children reported seeing their children at least weekly. For

Table 5

Number of children
among 300 patients in Continued Care Study

Number of Children	Total	Percent
No children	108	36.0
One child	58	19.3
Two children	60	20.0
Three or more children	74	24.6
Total	300	99.9

the 131 patients with children from whom information is available at terminal, 71 percent reported seeing their children at least weekly.

People who assisted the study patients in their personal care and household maintenance after hospital discharge were identified on study forms. These included both persons living within the household and those coming in from outside the homes. In the group of 64 patients who remained active with the public health nurse, 38 percent required no assistance at all in physical care when they returned home. Thirty-two percent were helped by spouses, with three wives assisting for every one husband. Living within the households were other persons who helped the respondents in their activities of daily living; about one-third of these were daughters; one-third were nonrelated persons and one-third were combinations of family members and paid attendants.

Changes in the physical assistance patterns after the two years had elapsed were not remarkable. Only five patients required additional people to help them, and eight of the 64, who had resorted to some personal assistance after coming home from the hospital, became sufficiently independent in this area that they managed alone. The rest of the group continued for the two years with the same help patterns that they had had at discharge.

Following hospital discharge households were maintained without outside help by about two-thirds of the active group. There was, however, help from family members or others living with the respondents. Paid attendants two times or more weekly, or a cleaning lady on a regular weekly basis did come into 18 homes. Only one of the study patients relied continuously on a friend for assistance in household chores. Again, this help pattern remained stable for the group as a whole for the two years of study.

Preliminary analysis of selected characteristics among the 64 patients who remained active with the public health nursing agency for the two years yields a scatter of findings. The total number of visits ranged from 247 to 11, with a median of 48. Focusing just upon the seven patients with the highest number of nursing visits, this group included four women and three men. Five were over 75 years of age, and one man and one woman were younger than 65.

Two of the seven most frequently visited patients lived alone. One, the youngest of the seven, a woman 53 years old, was wheelchair independent and maintained herself through assistance in physical care by the visiting nurse and the household help of dedicated friends. The oldest in this group also lived alone. He was an alert gentleman of 88 years, went out daily for his meals and worked part time during the two years of the study as a tailor. He was not dependent on anyone for either physical or household help.

Persons living in the households with the other five patients were either an integral part of their care or remained uninvolved, and the intensity of their interactions with the nurses varied widely.

The wives of the two married men were truly the care-takers since the patients were themselves so debilitated. The nurses, therefore, interacted primarily with these wives. Both patients had had strokes, and the nursing goal was to maintain a maximum level of physical functioning. While one of the male patients was passively involved in his care, the other, a total aphasic, was incapable of appropriate communication. The first could walk with assistance; the latter was wheel-chair dependent or bedfast. The children of neither couple participated in their father's physical care. In the one family they visited only formally; in the other, the two adult children lived with the parents but remained peripherally interested.

Two female patients lived with unmarried working daughters. The household of one included a husband and a live-in housekeeper as well. The first of these ladies, 86 years old, managed alone when her daughter was at work. The nursing visits with this patient were concentrated on her ambulation problems. At all times the nurse remained in telephone contact with the daughter, and they planned the patient care program jointly. The daughter took responsibility for her mother's physical care when she was at home, as well as household management.

Although the husband and the housekeeper were present at the nursing visits in the other home with a single working daughter, the patient herself was the primary focus of interaction with the nurse. In this situation the daughter of the 79 year old patient did not communicate at all with the nurse and was only minimally involved with the care of her mother on the housekeeper's afternoon off.

The patient receiving the highest number of visits, 247, was a mentally alert 76 year old female, a hemiplegic who lived with her husband and had a housekeeper coming into her home on a five day a week basis. Her husband and the housekeeper assisted her in toileting, transfer, and walking throughout the two years of the study. The nurse worked with the patient on rehabilitative exercises and health promotion (that is, safety, medical supervision, and nutrition). The couple's only son and his family visited weekly but were not involved with any of the patient's care.

Descriptions of recipients of nursing care are a collection of novelettes, always interesting and frequently puzzling to nurse clinicians and researchers alike. Analysis of the data in this study includes systematic description of the study's treatment variable, public health nursing care. Such descriptions of care are needed in order to document what nurses do and to devise appropriate measures of outcome of public health nursing.

The several social findings presented in this paper add to knowledge of the home situations of aging and chronically ill patients. Further this knowledge helps nurses to develop varying patterns of nursing care with this patient population.

The fact that aging and chronically ill men more often have wives than women have husbands not only influences their entry into a rehabilitation hospital in the first place, but also indicates who will be giving their care after hospital discharge. In a study of the delay period between onset of a cerebral vascular accident and application to a rehabilitation center, Wylie concludes that married men delayed application longer than married women "because women provide care for disabled partners longer than men do (13)." Townsend reports that "in sickness married men are mostly looked after by wives and when they do not have them it may be hard to find a substitute . . . (14)." On the other hand, men in Townsend's study used as their chief source of help a daughter or another relative (15).

The person caring for an ill, elderly person in the home may or may not be of benefit in helping him to maintain his maximum level of physical functioning. The nurse is often faced with a family member who actually deters the patient's progress. Experiences of nurses in this study are in accord with a finding reported in a study of an eight-month home follow-up of 46 hemiplegic patients. The latter study concluded that: "there is some evidence that when there is a cultural or idiosyncratic disposition on the part of a spouse to overprotect the patient, functional gains made during the course of the program may be vitiated (16)."

Public health nurses in visiting the homes of aging and chronically ill patients become acutely aware of their housing problems.

Single persons or married couples living alone may struggle to maintain their housing arrangement even under seemingly insurmountable odds. The woman reported upon earlier who lived alone and was wheel-chair independent was advised upon hospitalization within the study period to enter a nursing home. She refused and said, "If I do, I shall die."

In contrast, the nurse is involved also in homes where the elderly live with married children and grandchildren. In these three-generation homes she may see either an elderly person relatively isolated from household activities or an elderly person whose needs are placed at a higher priority than those of the husband or children of the married child. In the study population there were examples of patients who continued to live in three-generation homes, others who returned to living alone, and still others who went to nursing homes.

Townsend reports that as few as ten percent of older persons actually approve of intergenerational-joint living (17). But, the desire for separate households is combined with the wish to live near their children, to be visited and to be helped by them. This was first described in 1954 by Sheldon as independent propinquity (18); more recently it is called intimacy at a distance. (19).

Independent housing for two generation families dwindles as people enter widowhood and higher age brackets. The re-establishment of a single household by families has been called by a group of Austrian sociologists revocable detachment (19). This means that while separate living arrangements are maintained as long as possible, when it is no longer optimum to do so, family members reunite in one household. This is evidenced both by divorced children coming back to the parent's home and aged persons, especially widows, moving in with children. In this study's findings it is shown that there were two women patients over 75 years of age living with children for every one under 75 years of age.

Documentation of high frequency of interaction with children has challenged the disengagement theory of the aged which suggests that human aging involves an inevitable severance of relationship with others (20). High frequency of visits between patients and their children in this study is not dissimilar from findings in other studies (18, 21, 22). Further, the findings of this study show a stability of the interactions over time.

For nurses working with aged persons with children it is crucial to be aware of the high esteem of children's help for elderly parents. "When aged persons asked (by check list) which person or services they feel too far from, the majority of old people will name their children or relatives rather than other persons or services (19)."

Systematic efforts to acquire knowledge of patient's post-hospital experience (except for mental and tuberculosis patients) are just becoming available. One of these reports reminds the reader of the following: "It should be borne in mind . . . that the patient's family is still the major resource in caring for him . . . (23)."

The rising number of aged persons in this society, the higher incidence of chronic illness among them, and the encroaching dependence that becomes part of their real world places an even greater burden on public health nurses. They may, and often do, become a sturdy adjunct of help to this group.

As the public health nurses are caught up inevitably in the maelstrom of the shattering events of the older sick, they have the opportunity to maximize their nursing skills in caring for older sick people. It is imperative that nurses through continued research gain new knowledge in utilizing the strengths and adaptive functions of the families of the older, referred to as *familia spongia* (24).

The nurses in this study supported aging-chronically ill people in their efforts to remain in their own homes in the community. The study has shown the independence in living arrangements of many chronically ill persons. It has documented the help patterns with which older people manage. Further, it has demonstrated the extent of family interaction.

Continued nursing research is necessary for developing guides for optimal timing of nursing intervention with aging and chronically ill persons. Whether nurses help these people maintain their independence through the use of family and other resources, or whether they plan with them their moves to more dependent living arrangements, nurses need documented facts on which to base decisions.

With more and more information about the aging and chronically ill, nurses will be better able to help them live in dignity.

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CRITIQUE

of

OLDER PATIENTS AND THEIR CARE: INTERACTION WITH FAMILIES AND PUBLIC HEALTH NURSES

Virginia Stone, R.N., Ph.D.

I am pleased to discuss a study in a field where there is a great need for knowledge derived from research. I am further delighted as the study addresses itself to a global question of my interest: Does nursing make a difference and, if so, what? Or, in this instance, does public health nursing make a difference to a selected group of patients? I think we must be honest in answering this question, whether the answer be negative or positive.

Before beginning a discussion of the design itself, which I have chosen to concentrate upon, I would like to make a few cursory remarks and raise some questions. The grant for the study was made to a school of medicine with the two main investigators being physicians. With this fact in mind, I pose the question of the role of nurses in the planning phase of the research design. Another question to be raised is: What is the focus of the study? Is the focus on public health nurses caring for chronically ill aged, themselves? These are two different things; one equates aged and the chronically ill and the other relates to a specific group of patients. It is true that there might be a relationship between the two. If you were to visit the Duke University Center for the Study of Aging currently, you would hear discussion of basketball and aging for after the team's great win last week, it predominates all conversation. Now there happens to be a relationship in that some basketball players and some older people dribble. But this does not mean that one studies basketball players and old people together, though one may wish to study old basketball players. My main reason for making this point is that these two phrases, the aged and the chronically ill, are used interchangeably throughout the report.

Then I would like to challenge the statement, " . . . public health nurses are unique in their knowledge of older persons." What is this uniqueness and how was it acquired? Marjorie Elmore, in her rather recent dissertation, stated, "The geriatric nursing aspects of the curriculum received little attention in the total planning and evaluation activities in those schools of nursing participating in the present study (1)." Of the 37 public health nurses who were active in this study, tenure in the agency ranged from three months to 26 years, with a median of 18 months. Therefore, one wonders still further about this uniqueness.

The hypothesis as stated on page 132 reads:

> After discharge from a chronic disease rehabilitation hospital, patients whose care is regularly supervised in the home by a public health nurse (working with the patient's physician) will more often maintain or increase physical, psychological, and social function than will patients whose care is not so supervised.

The choice of design for testing the hypothesis was experimental in nature with the independent variable identified as public health nursing care and the dependent variable as maintenance or change in function of the patient from a physical, sociological, and psychological point of view. The target population was patients discharged from a chronic disease rehabilitation hospital.

Even though it is rather trite to state that the output depends upon the input, it is believed that the input, the independent variable of this study, needs scrutiny. On what basis was it assumed that all patients discharged from a rehabilitation hospital would need public health nursing care and need it for two years with a minimum of 25 visits? Kelman, who the author of this paper quotes several times, in discussing evaluation of clinical practice reiterates that the patient group must be defined in terms of the need and availability to be affected or benefited from the service. In this study there were no clinical criteria for selection of patients needing public health nursing visits. Rather the sampling criteria were patients 50 years of age and over who had been hospitalized at least six days and who were to be discharged to a private home in the visiting area. It is known that even some of the subjects questioned the need for this service. Apparently 16 per cent, for some reason, remained in the community but did not receive this service.

Moving to the dependent variables, a number of instruments were used to measure psychological, physical, and sociological functions. These instruments were not identified and therefore cannot be evaluated. However, Table 1 indicates that some of them were related to orientation scores for time, place, and person, and for walking status.

On-going research in the area of memory has raised many questions regarding the reliability and validity of the commonly used test for time, place, and person when used on old people. Kelman also has raised the question of the logic of applying uniformly a set of physical, social, or functional change measures to all patients when one or more such changes may not have been clinically anticipated or specified as a goal for all patients. At the present time many conditions affecting older people are thought to be irreversible. Therefore, regardless of nursing practice, these conditions may not be maintined or improved even though public health nursing service could be helpful to the patient.

In administering tests to older poeple some of the effects of the process of aging must be given consideration. Hearing loss, speech discrimination problems, vision--to mention only a few--may determine the choice of testing measures. The subjects in this study range in age from 52 to 92, which means there could have been a range of variability in response due to the aging process rather than to the value of public health nursing per se.

It is my understanding that the observer of the termination visit was a person new to the respondent. It is known that older people respond more slowly to the unfamiliar than do people in other age groups. The change in observers could have had some effect upon the respondent in her adjustment to the new individual.

Social function was determined by interactions with family members, friends, and social groups. The relationship of this to public health nursing is questioned, though it is realized that, if the public health nurse is to supervise care, she must be able to identify the person to be supervised and his relationship to the patient. Household composition may or may not influence social interaction. It is well documented, especially by Peter Townsend, that there can be close proximity of older people without interaction (2).

Family patterns may be better predictors than household composition. For example, Alan Kerckhoff in Social Aspects of Aging, identified three family types and expectations by family type as follows (3):

1. The extended family - Children grow up: they live close to their parents and have considerable mutual aid and affection present between generations.
2. The modified extended family - These families do not expect propinquity but do expect considerable mutual aid and affection.
3. The nucleated family - With this family there is neither propinquity nor very much mutual aid.

In my own research I found that family expectations regarding older people differed by community environment. In looking at family patterns of people ranging in age from 52 to 92, 40 years difference in age, we should find real differences. The very old could have children who are also in retirement. These differences could influence the need for public health nursing in different ways.

The mechanics of developing and operating an experimental study were superbly handled, including the process of randomizing. Also the observers apparently were well supervised. This then serves as an example of how, even though mechanics are well handled, the design can be weak.

The analysis of data is forthcoming though it is already known that there was no significant difference between the two groups--those receiving service and those not receiving service. This finding could have been anticipated because of the input and especially when, as we heard today, 34 of those in the control group also received public health nusing service.

Often an experimental study needs to be preceded by a descriptive one. Perhaps this study could have benefited from such from which public health nursing practices, length of time visits would be needed, and frequency of visits could have been determined with more meaning.

The amount of data available from this study could be a gold mine if it is made available to others for analysis. This could be the study's major contribution. I would like an opportunity to examine the data by age by decades. The 1960 census revealed that the highest rate of population increase from 1950-1960 was in the age group 85 years and over. In my own state of North Carolina the number in this age bracket almost doubled in a ten-year period. The 1970 census should reveal even greater numbers of people in this age group. This is a group with which we have had limited experience. It might be possible to compare public health services rendered by age and thus find some clues as to the needs of the old-age group.

Again, I would like to know if public health nurses are provided with knowledge in gerontological nursing. Do services from a group of nurses prepared in this type of nursing differ from services from those who do not have this special orientation?

In summary, the present study did not prove the hypothesis because of the handling of the independent variable, the selection of the population, and the dependent variables. However, from the cumulated data there is opportunity to explore new hypotheses.

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FURTHER REMARKS

Mary Adams

In commenting briefly on Dr. Stone's critique, Dr. Adams stated that several points of criticism were well taken. One, she had not meant to imply that chronic illness was linked to aging--it was simply that this was a study of older poeple who had a chronic illness. Some of the patients seen were certainly quite well and very able. In fact, there was considerable variation among the individuals studied as to degree of illness.

The second point was the question raised about public health nurses' unique knowledge of geriatrics. Dr. Adams agreed that these nurses needed more information about geriatrics and were overwhelmed often by problems encountered in giving geriatric nursing; however, she pointed out that despite this, because of their considerable experience in working with this age group, they also had a great deal of knowledge and understanding of the aged.

With regard to the question of composition of household, Dr. Adams stated that one part of the study was involved in a series of sociometrics in an effort to learn more about the kinds of communications going on in the households. It was recognized that just living in the same household did not mean that the people talked with each other.

GENERAL DISCUSSION

It was suggested that a fundamental problem of ethics existed because patients in this study were not asked for their permission to be in the study--in fact, did not know they were in a study. There was agreement that patients have a right to know they are a part of research and the right to refuse to participate. This particular study was started prior to the period of current major concern with this issue and permissions were not a requirement of the research. However, it was pointed out that a few of the patients did refuse to be interviewed by the observers and to be seen by the public health nurses. In all likelihood there would have been no difficulty in obtaining permission from those who did participate since older people generally welcome the fact that people are interested in studying them.

Discussion of the design of the study brought out some of the problems involved in this type of study. For one thing, because patients in the experimental group received the usual visiting nurse care, there was considerable variation in frequency of visits. Furthermore, some patients also required periods of hospitalization during the two years of the study and 87 percent of the 300 subjects in the total study died during the two years. An attempt is being made to use the life-table approach to analyze this part of the data. Another problem was related to the variation in use of nonnurse observations at intake, during the study, and at terminus. Dr. Adams explained that a four-cell design was used to try to control for the effect of visits by the observer. It was recognized that this observer could have an effect on patient outcome.

One of the participants pointed out that with regard to visit variation there may well be a real problem with respect to judgment of need. Another recent study demonstrated this problem in that, while considerable agreement was found among public health nurses as to the health problems present in the families studied and as to how well the families were coping with the problems, there was disagreement among them as to the need for public health nusing service or the amount of service needed. In fact, visits were discontinued in some families when actually there was much left that still needed to be done with them. This problem still requires much study.

A major problem in discussing the present study was the fact that so little was given as to established baseline data and about the measures of nursing effectiveness to be used at the end of the selected time period. A special record was maintained by the visiting nurses caring for the experimental patients and the interviews by the nonnurse observers were to be used in evaluating the patients at point one and point two in time. However, information regarding the data and criteria for evaluation was not included in this paper. The general criteria mentioned are of two kinds: 1) maintenance, deterioration, or improvement of such patient functions as self-care, walking, mental orientation, and use of medical resources, and 2) interactions with family members, friends, and social groups. Information about the first was obtained by an index (not described) of function at the two points in time. Information about the second type of criteria was obtained by means of a series of questions in the interviews by non-nurse observers. However, not knowing more about the instruments and their use made it difficult to evaluate these criteria or the methods used to obtain the data.

A second major problem was pointed out, i.e., that there was no attempt at examining the content of the nursing visits. Frequency of visits is the variable studied. However, it was suggested that a study to determine effectiveness of nursing care would need to consider the content of this care. Frequency alone tells one nothing about what goes on during a visit. If the data will not show something about the length of visits and the nature of the interactions, it will not be possible to judge the effect of the nurse's care. Measures are needed to evaluate quality as well as quantity.

In reply to a question about the basis for the statement, "In the group of 64 patients who remained active with the public health nurse, 38 percent required no assistance at all in physical care when they returned home," Dr. Adams said that the 38 percent were judged to require no assistance because they were independent in self-care.

* * *

PROBLEMS IN THE MANAGEMENT OF TUBERCULOSIS PATIENTS WHO SUFFER MENTAL ILLNESS

Shizuko Y. Fagerhaugh, R.N., M.A.

Two questions are posed in the research on tuberculosis patients who concurrently are suffering mental illness: 1) What similarities and differences obtain in the properties of the two forms of illness? 2) What professional and institutional problems are posed in the treatment and care of such patients?

This research is based upon the sociological premise that society makes institutional arrangements to deal with various categories of deviants (sick, criminal, mentally retarded, etc.); that these arrangements tend to be ordered around specific characteristics and properties of the group. In so far as the deviant group is "pure," the institutional arrangments deal with the group in a relatively satisfactory manner. If, however, the group loses its "purity" and develops properties of still another and unrelated group, institutional and professional conflicts arise since the arrangements for one group are probably at variance with those of the other.

The similar and dissimilar properties of tuberculosis and mental illness were identified; the following are properties common in both classes of illness:

1. In the acute phase of illness, the patient is incarcerated in a hospital on grounds that the illness endangers self or others; legal commitment is brought to bear if the patient does not comply.

2. The illness tends to take on the character of a stigma.

3. In the acute stage of illness, there is relatively strict isolation from the outside world. Patient movement is severely regulated according to criteria of safety to self and others.

4. Because of the chronic nature of the illness there is lingering medical and legal surveillance over the patient on the grounds of probable recurrence.

5. The advent of drugs has shortened the period of hospitalization, allowing large numbers of patients to be treated in the outpatient clinics, and the patient himself regulates a significant portion of the treatment program.

6. For most patients, the course of illness and personal status are ambiguous.

Dissimilar properties of the two classes of illness are:

1. Degree of consensus by professionals on the disease process and the disease status at any given time: In tuberculosis there is appreciable certainty and agreement by professionals on the disease course and the patient's disease status. In mental illness, by contrast, consensus amongst professionals about the illness process and validation of the patient's illness status are often difficult to reach.

2. Degree of clarity and specificity of the treatment process:

Treatment in tuberculosis is concrete, routinized, and relatively predictable. In mental illness, the treatment is more general and less predictable.

3. Pattern of patient-professional relationship: Persuading the patient to follow the concrete treatment regimen is primary in treating tuberculosis. Although the patient-professional relationship is philosophically important, this is operationally of secondary consideration. Patient-professional relationships is regarded as of paramount importance in the treatment of mental illness.

It can be expected then, that the dissimilar properties of the two classes of illnesses create conflicts in the management of the mentally ill, tuberculosis patients because the institutional arrangements and professional approaches for tuberculosis may be at variance with those of mental illness. It can also be anticipated that, given these dissimilar properties, interdisciplinary (psychiatry and tuberculosis) conflicts will occur because there will be different expectations of each other in the management of these patients, as well as different expectations of patient behaviors. Thus, in one instance, a markedly delusional patient was considered a problem to the tuberculosis ward staff, not because he engaged in "crazy talk," but because he refused to take the drugs for treatment of tuberculosis regularly. The tuberculosis staff were angry with the patient's psychiatrist for "not getting the patient to cooperate" (as if this is what psychiatrists are "supposed" to do).

It can also be anticipated that professionals in different work settings (tuberculosis ward and clinic) will have different orientations and frames of reference about mental illness. Furthermore, the evaluators or definers of mental illness in these work settings stand in different relationship with the patient and may, therefore, define the "same" behavior quite differently. Thus, in one instance, a patient defined as an extremely troublesome mentally ill patient by the hospital ward staff, was not so regarded by the clinic staff.

The above conceptual formulation provides a framework to analyze the ways in which the dissimilar properties in the two forms of illness create professional and institutional problems in the treatment and management of the mentally ill, tuberculosis patient. A further elaboration to this investigation is the discovery of how these problems are modified or altered according to who, where, how and when the patient is defined mentally ill during the patient's illness career, and the consequences of these to the patient.

Research Design and Method

The research approach used in this study is that of fieldwork method which operationally is a combination of direct observation in "natural" settings and interviewing the various actors in these settings. Fieldwork data tends to be qualitative rather than quantitative; and the researcher is not so much concerned with discovery of causal relationships (A causes B), as with discovering general and significant properties of the "natural" setting. The researcher correlates what he sees with what he hears and develops a conceptual framework for understanding and explaining what takes place in a given social context under certain given circumstances (1). As indicated by Glaser and Strauss, field method is particularly useful in the discovery of substantive theory. By substantive theory is meant "formulation of concepts and their interrelationships in a set of hypotheses for a given substantive area such as patient care, gang behavior, or education based on research in the area (2)."

My research on the problems in the management of the tuberculosis patients who concurrently suffer mental illness developed out of a larger behavioral science study of the San Francisco City and County Tuberculosis Health Services. The larger study is a three year project which began in August 1966, under the direction of the Sociology Department of the School of Nursing, University of California Medical Center, San Francisco. The objective of the research is the improvement of outpatient tuberculosis care. The research is being conducted by a team with a sociologist as director; and two field workers, a sociologist and myself.

The overall research design is based on the concepts and assumptions of symbolic interaction theory (3). Briefly, this theory holds that the "reality" of any given situation is a function of the manner in which the actors in that situation construct a "reality" for themselves which guides their behavior, and out of which they form behavior patterns. Thus, in order to handle a complex situation and complex human actions, it becomes necessary to ascertain precisely how the actors in the situation define the situation--in this case, how does the tuberculosis patient perceive his world and how does the staff perceive his world? Therefore, in this approach, the researcher enters the area of investigation with an "open mind" and with no preset hypotheses to be tested and no prearranged instrument and procedures in order to avoid imposing a "reality" which has no meaning to the actors in the situation. This is not to say that the fieldworker does not have hunches or guesses. Given extended time in the field and the continuous analysis of field data, a conceptual framework develops as the research progresses. These processes guide the further development of strategies, tactics, and the use of various instrumentations.

In the fieldwork method there are varieties of problems which need to be attended to in developing propositions and conceptual frameworks during the various phases of the investigation. The researcher must decide what, where, and when to observe. He gets his cues from the kinds of data being collected which indicate what new strategies and tactics are required to find answers to questions raised, both in terms of the nature of the substantive area and the operational problems being posed in the setting.

Since the fieldworker is the main instrument of data collection, efforts must be made to assure credibility in the individual operations, also to control for bias, selectivity of perception, and conception, which may lead to error.

In the larger study the researchers spent months surveying the total San Francisco City and County Tuberculosis system. By systematically analyzing the many events observed in several tuberculosis settings, the major properties of the system were conceptualized, and from these were developed specific hypotheses and propositions about what we saw and heard and how these were interrelated.

As to fieldwork tactics, a variety of tactics were used. At the beginning of the study, the researchers practically lived in the clinic. Among the many kinds of tactics used were; chatting with patients who were waiting in the clinic, and following the patients through the clinic visit. Strategic stations were used to observe patient-staff interactions, such as the receptionist's desk, nurses' station, and doctors' examination rooms. Many, many days were spent following the staff in their daily round of work. Gallons of coffee were drunk in the back room of the clinic in informal interviews with groups or individual staff members. After an extended period of time, and as the staff became more comfortable, the researchers sometimes argued with the staff as a means of checking out information and to gather further data.

The researchers followed public health nurses on home visits.

In order to see the hospital in its proper relationship with the clinics, weeks were spent observing and interviewing the hospital staff and the hospitalized patients. Selected patients were observed and interviewed over an extended period of time. Some patients were interviewed during their hospitalization and following release from the hospital to their homes. After eight months in the field, the researchers had a general picture of what the clinic operations were like, the problems of the tuberculosis system, and the varied perceptions of the tuberculosis staff and the patient.

One principal control over observer bias was assured by the team approach wherein through frequent team conferences--by analyzing each others field notes, and by discussions with those outside the field--the team researchers constantly reformulated hypotheses and propositions, discovered gaps in information, and reexamined strategies and tactics. The developing categories and propositions were also informally tested against existing knowledge and assumptions as developed by other researchers in this area. Further, the conceptualizations were checked with the very actors in the field through observations and in the interview process. All these analytic strategies guarded against blind spots, biases and premature generalizations.

The properties of tuberculosis as a disease and of the tuberculosis treatment and care system were identified in the early phases of the larger investigation. In order to provide greater credibility to these properties and to assure their relevance, we abstracted and investigated another group to informally check out and compare our generalizations. Comparison groups are useful in providing new data on categories being developed; they suggest new hypotheses, and help verify initial hypothesis in diverse contexts (4). The comparison group in this case was a private tuberculosis sanitarium and private physicians engaged in tuberculosis work.

Since the specific research referred to in this paper pertains to those tuberculosis patients who also have or develop emotional disturbances, selected personnel in the San Francisco City and County Mental Health system were interviewed. Through these interviews the properties of mental illness, and of the psychiatric care and treatment process of the system were identified. The similar and dissimilar properties of the two forms of illness were then conceptualized.

In the early phase of the present research it was found that mentally ill tuberculosis patients were particularly troublesome for tuberculosis personnel. Also, that objective referents for disturbed behavior used by the tuberculosis staff varied according to the work setting (in this case, the hospital and the clinic), and varied from the psychiatrist depending upon his ideology and his work setting. Further, the problems in management of these patients varied according to types and stages of the mental illness, and the sequential development of the two diseases during the patient's illness career.

From the data bearing upon the dual affliction suffered by the patients, it was hypothesized that the problems attendent upon the management of the mentally ill, tuberculosis patients are explained in part by the dissimilar properties of the two classes of illness since the arrangements and approaches for one disease may be at variance with those of the other. Also, it was hypothesized that these differences would create interdisciplinary (tuberculosis and psychiatry) problems because each system will have different perceptions and expectations of each other and of the patient. Related to this, mental illness is not so clearly a disease entity. It follows then that those with a psychiatric frame of reference, and those with a physical disease orientation may define the "same" behavior quite differently, and not understand the other's definition. In each case, the evaluator or the definer stands in different relationships with the patient, and from those who use other orientations, or other languages for defining behavior.

Using the above tentative conceptual framework as a guide to what and where and who to interview and observe, a pilot study was undertaken. This approach is developed by Glaser and Strauss in their conception of "theoretical sampling" (5). Very briefly, "theoretical sampling" differs from random and stratified sampling in that, it searches out those units of observation which provide the opportunity for discovery of properties and patterns of a social system. Random or stratified sampling, on the other hand, is more suitable for testing of propositions and hypotheses which have been already proposed. Theoretical sampling is for discovery of properties which are yet to be tested. Thus, theoretical sampling is concerned with discovery rather than testing. Selected clinic and hospital personnel in the various settings (4 tuberculosis clinics, 3 tuberculosis wards), and tuberculosis psychiatric consultants were interviewed following the principle of theoretical sampling which maximizes discovery. A theoretical sample patient was drawn from the tuberculosis system (clinic and bed) whose behavior was medically defined for us by the tuberculosis personnel as that of mental illness. The sample included patients with varying psychiatric diagnostic categories and patients with different sequential development of the two illnesses. Currently, the researcher is observing and interviewing a total universe of tuberculosis patients who are regarded as mentally ill by the tuberculosis staff and who entered the San Francisco City and County tuberculosis system as of April 1967. This is being done both as a means to check out propositions derived from the theoretical sampling, and to discover some new properties and categories of the system.

In both the pilot and the current project, the staff are interviewed (as well as observed in their clinical practice where possible) on matters related to: 1) behavioral referents for mental illness, 2) perceptions of barriers to proper patient-professional relationship and to treatment, 3) the management of such patients, and 4) expectations of care and advice given by psychiatric professionals called in for consultation.

Research on the patients themselves involve observations and interview related especially to: 1) the status and development of relations between the patient and the tuberculosis staff, and 2) patient perception of his illness(es) and its (their) course of treatment. Patient-staff interaction is observed in the clinic and hospital and follow-up interviews with staff and patients are conducted.

In both the pilot and current study, the patients are adult, include men and women, and are predominately from the lower economic strata. In the current population of new active patients entering the clinic system as of April 1967, of a total of 110 new active cases, the psychiatric diagnostic categories (as applied by the tuberculosis staff with the help of psychiatric consultation) include 20 chronic alcoholics, 3 schizophrenics, 3 sociopaths, and 2 drug addicts. All the "distrubed" nonalcoholic patients are being interviewed, but not all those defined as alcoholics. The rationale for this is that the tuberculosis staff define some of the latter as mentally ill, and others of this category are not so defined. A sub-sample of alcoholics from both the "disturbed" and "nondisturbed" group will be compared for the manner in which they are handled, and the way these patients define their own condition. The current research design prescribed the observation and interviewing of all hospitalized patients defined as mentally ill by the hospital staff and who have newly become patients of the tuberculosis system between October 1967 - March 1968. To date there are 5 patients.

To analyze the data, a model is necessary to organize the mass of data into a logically organized whole. The model for analysis is that of an "arena" which is based on the notion that the care of patients takes place in an institution with different professionals who have a variety of career patterns and treatment ideologies and varied conceptions of each other and who negotiate the division of labor and develop a style of working together. At the same time, the institution imposes certain limitations upon the patient and the professional. Using this model, three aspects of tuberculosis mental illness problems will be examined: 1) the properties of the larger arena, i.e., the municipal health system and the subsystems (tuberculosis and psychiatry); 2) the properties of mental illness and tuberculosis, their similarities and dissimilarities, and the conflicts arising out of the dissimilarities; and 3) the fate of the patient depending upon where and when he is defined mentally ill, taking into account the properties of the total health system and the subsystems, the properties of the two illnesses, and the varied career patterns and treatment ideologies of the professionals. The objective of the model is to provide a framework to "hook up" all these aspects into a logically organized whole.

The following is an example of the "hooking up" process: One of the properties of the city and county hospital is that the hospital is organized primarily around providing acute care. In contrast, one of the properties of tuberculosis care is that it is very routine, concrete, and undramatic; and most of the patients are not acutely ill. It was observed that the majority of nurses working in the tuberculosis units were older than nurses working on other medical and surgical units. This is because older nurses could no longer keep abreast with the demanding pace of an acute medical and surgical unit. These older nurses were educated (career pattern) at a time when the psycho-social needs of patients were less emphasized, and they are quite fearful of mentally ill patients. The tuberculosis nursing staff's comprehension of psychiatric care was based on a model of psychiatry of some 20 years ago, and more akin to that of the layman's understanding. At the same time, the internes and residents appear less interested in tuberculosis than in other acute pulmonary conditions, and thus are not readily available for consultation on the tuberculosis units. For example, medical rounds on the tuberculosis units are made only weekly, whereas on the acute pulmonary units rounds occur daily. All these factors have implications upon the kind of care a mentally ill tuberculosis patient will receive on the tuberculosis unit. The care of the mentally ill, tuberculosis patients is largely the responsibility of the least psychosocially sophisticated nurses in the hospital.

The following is an example of the varied perceptions held by professionals in the two sub-systems of each other and the implications of these varied perceptions to patient care. Because of the shortage of psychiatrists in the hospital, psychiatric consultation for medical units throughout the hospital is far from adequate. Personnel of medical units throughout the hospital complain about the inadequate psychiatric consultative service. The tuberculosis staff are not aware that other parts of the hospital are equally dissatisfied. This is explained in part because the tuberculosis units remain isolated from the rest of the hospital. Because tuberculosis is still a very stigmatized disease, the tuberculosis staff believe the psychiatrist avoids the patients out of fear of tuberculosis. On the other hand, the psychiatrists apply psychiatric perspective to the tuberculosis staff. They believe the tuberculosis staff are extraordinarily fearful of emotionally disturbed patients. They view the barrier techniques used in tuberculosis and the concern for ward order as evidence that the tuberculosis staff is overly compulsive and rigid, and that the tuberculosis staff create their patient problems. They also believe that extended isolation from the outside and the stigmatized nature of tuberculosis have much to do with the patient's anxiety. These gross misunderstandings of one another prevent the two groups from engaging in meaningful dialogue and at times result in poor patient care or even disasterous care.

The contribution of this study, for nurses as well as for other health professionals, is a framework from which health workers can analyze the sources of conflict in the management of these patients, and the relationship of these conflicts to professional roles. From such analysis, professionals can begin to develop courses of action. Also, from this study hypotheses for further study might be developed.

* * *

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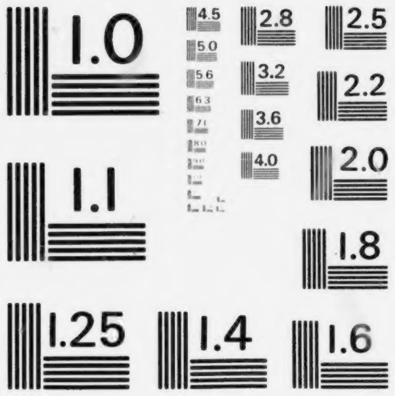
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CRITIQUE

of

PROBLEMS IN THE MANAGEMENT OF TUBERCULOSIS PATIENTS WHO SUFFER MENTAL ILLNESS

Mabel A. Wandelt, R.N., Ph.D.

One of the things that intriques me in this investigation is that it gives us an illustration of an approach quite different from the other approaches for study that have been represented here at the conference. Quite different. Indeed, so different that three months ago I would have insisted that I have a soap box from which I could mount my protest to the method. Then Dr. Osborne came to our college and I have modified the protest, moving a little away from the concept of developing the very rigid, well-defined, well-outlined design before attempting to collect data. I can now see to some extent the rationale of the field work approach where it seems that the researchers make up the rules as they go along.

Mrs. Fagerhaugh mentioned that she wonders about everything and before she made this quite emphatic, I had made a note to myself to ask her when she ever feels comfortable about anything that she is doing? But then, I began to wonder if, in trying to picture the "hooking up" for us, she would view this process as the individual does who is developing a masterpiece in oil. The artist begins with line sketches, he paints in central figures, and finally he paints in the background, to have a finished masterpiece. I presume Mrs. Fagerhaugh is now gathering the final background materials and will soon be presenting us with the finished masterpiece.

As I mentioned I am becoming rather intrigued with the field approach but since hearing Mrs. Fagerhaugh this morning, I know that I will not adopt it. She mentions that she runs upstairs to another ward, that she ran to the director of nursing, and that she ran over to the clinic--you see, she is younger than I.

I think one of the things that was important in the process of approach of her study was the multiple techniques that were used and the purposes for which the multiple techniques are used. The techniques provide a safeguard against bias, they provide the securing and reviewing of additional elements, and they reveal additional relationships. Some of the techniques used were observation and interview. In addition, team conferences were used to compare observations and thinking; through this latter process the researcher may expect to come up with far more valid interpretations of her observations than would be possible from individual interpretations.

Then there is still another technique that is involved--the matter of the several similar, but different, settings in which observations are made. I do have one question that I hope Mrs.

Fagerhaugh will discuss. She described in her paper materials from the group of subjects which they began accumulating in April 1967 and she identified some of the characteristics about them. Now there is mention of another group which will include those from October, 1967 to March of 1968, and I could not distinquish the difference in these two groups and why the second group was being developed.

Mention is made that there was no prearranged instrument for procedures, this is the open minded approach. I wonder about the interviews. I would like to have a little better understanding about these. From Mrs. Fagerhaugh's description of running from place to place, I get the idea that there is no written outline or interview schedule, but I wonder if, as they move along, they do firm up some specific interview schedules and use these for later work?

I am particularly grateful to this study because it has added a nice scientific word to my armamentarium for something I realize now I had never even given a name, though I use it, and that is "theoretical sampling." I am not sure what theoretical means in relation to this sampling, but it is a nice new word in the research jargon--a nice scientific term for a rather unscientific process.

Now, I think I may have portrayed the idea that I have come to admire this approach, but this doesn't mean indeed that I am going to give up the nice a priori-pattern design. On the other hand, an interesting study in itself might be to use two approaches for the same study. One study team would plan and use the openmind approach and another study team would do a well thought out plan including deciding what they are going to look for, even anticipating their analysis of data, and so forth. I can even see how this is going to work and what would happen. You identify the problem for study, you set the two teams on a line, and you say "go." The openminded team would confer for two days and then they would run out into the field and begin gathering data. Of course, they would also have further conferences. Those in my school, with the well-thought-out-plan, would spend two months, or might it be 20 months, to develop the design, plan the tools, and test the tools, and then perhaps they would be ready to go and make some observations.

I would like to see the outcomes of these two approaches evaluated. There are many things that we could look at, but certainly there would be the matter of comparing the time required for the study; that is, and I am talking not only about the period from design through the data collection, but from the beginning until the masterpiece has been painted - the art reported or published, if you will. I would like to see comparisons for the two approaches of the involvement of the study personnel and the subject personnel. I would like to see the comparison of the outcomes of the findings; that is, outcomes in relation to findings, interpretations, and completeness of the observations that were made in the situation, and so forth. Well, that is a proposal that

I see evolve from thinking about this approach, and putting it to the test.

Then there is another question which has not been answered for me; my rigidity requires that I ask, "When do you review the literature?"

Another question that I have is: Will this study include a group of mentally ill patients with tuberculosis, that is, tuberculosis patients in the psychiatrically-oriented setting? Mrs. Fagerhaugh did mention some in her findings about the personnel who were the visitors to the tuberculosis clinic, and I wonder about looking at it from the other direction. Indeed, which is the greater problem, the tuberculosis patient for psychiatric personnel or the psychiatric patient for tuberculosis personnel.

On the other hand, with the background and knowledge that I have about people and the care of the tuberculosis patient, I indeed must accede that tuberculosis personnel find anything but tuberculosis a problem, and it distresses them greatly. And, I am reminded of the Little and Carnevali study of the tuberculosis patients in Seattle where they found that what the personnel did, at least what the nursing personnel did, did not make any difference in patient behavior.[1]

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[1] Little, Delores E. and Carnevali, Doris. Nurse Specialist Effect on Tuberculosis. Nursing Research. 16:321-326, Fall 1967.

I believe that there is a suggestion in this study for still another study that gets into the content area again, and that is a detailed study of the differences for the patients in relation to care in the tuberculosis setting or in the psychiatric setting and I mean differences in outcomes for the two illnesses in those two settings. I think from the evidence that we have even so far and Mrs. Fagerhaugh's study, there must be a need for this.

The idea of the preliminary identification of properties, the many properties that are the same for these two groups of patients, was good but I am concerned that the explorations have all been in relation to the problems of the personnel. I wonder about the problems caused the patients by attitudes. Mrs. Fagerhaugh does mention that they used questionnaires with the patients. However, to understand and evaluate treatment and the outcome of treatment for these patients, it seems to me requires more than a knowledge of patient attitudes.

The other thing that intrigues me that we have not learned from the paper, or discussion so far, is the influence of the sequence of the two illnesses; that is, whether the tuberculosis patient becomes mentally ill or whether the mentally ill patient gets tuberculosis. I will be intrigued in hearing something about this. I am wondering indeed in my ignorance whether it might be well to think of having the psychiatrist and psychiatric nursing personnel treat the tuberculosis patient rather than the other way around. I propose this on the basis of her finding that the patient-personnel relationship, as far as the successful outcome of the tuberculosis, is of secondary importance, but for the mentally ill patient the patient-personnel relationship is of paramount importance.

The tuberculosis personnel allow the problem of mental illness to interfere with interaction. They are concerned with the patient cooperating. They obviously are not able to get their patient to cooperate. They think the psychiatric personnel ought to do this. Also quite obviously the psychiatric personnel are not as distrubed by the noncooperative, depending on the definition of the patient, and perhaps they could do a better job. Even though Mrs. Fagerhaugh tells us that the psychiatric personnel are deathly afraid of the tuberculosis patient, perhaps they could be helped to look at some of these newer findings about the care of the tuberculosis patient who, with the use of modern drug therapy no longer requires a distinct kind of care that is different from that of the psychiatric patient. That is, there is no longer need for prolonged bedrest for tuberculosis patients, nor is there need for precautions against spread of disease which involve isolation of the patient and elaborate rituals of caps, masks, gowns, and money washing.

Mrs. Fagerhaugh mentions that the tuberculosis personnel are 20 years behind in relation to the care of the mentally ill. I am not so sure from her findings that they are not 20 years behind in the care of tuberculosis. When she mentions that the mask worn by tuberculosis personnel is a barrier to establishing relationships with the patient, I wonder if this mask is not also a barrier to tuberculosis patient personnel. You know, the little mask long since should have gone. Extensive studies that were done in India found that new cases among contacts of newly diagnosed tuberculosis patients were no more numerous when the patient was treated with the drug at home than when the patient was sent to the hospital. In other words, the danger is before the diagnosis rather than after. Once the patient has been diagnosed and placed on antimicrobial drugs, the likelihood of others acquiring the disease from him is past.

I see in this study implications for studies of tuberculosis in relation to other illnesses. Mrs. Fagerhaugh does mention this, but Little and Carnevali in their study (there have been many others that have revealed the same thing) found that their tuberculosis patients each had an average of five other illnesses. What determines the priorities of treatment of these illnesses? I think it is quite obvious that if one of the illnesses is tuberculosis and they get in the hands of tuberculosis personnel, the tuberculosis receives priority regardless of what other illnesses there may be. I wonder if there are not many similar situations where there are multiple illnesses. And, I wonder what is being done to establish priorities of treatment. Of course, I suppose someone could come back and say, why must there be priority? If there are five illnesses, let's treat five illnesses, and that is a nice idea. I am not sure that it would work.

In conclusion, may I say that I was intrigued with this study, because I feel that one great area in nursing research is the need to have precise identifications of the totality of situations. It seems to me that this particular approach is an illustration of a concept of research wherein someone has expressed the fact that the purpose of research is to see what everyone else has seen and to think what no one else has thought.

* * *

FURTHER REMARKS

by

Shizuko Y. Fagerhaugh, R.N., M.A.

One of the questions raised in the critique related to the nature of theoretical sampling. Chapter two in the reference, The Discovery of Grounded Theory: Strategies for Qualitative Research by Glaser and Strauss (Chicago, Aldine Publishing Co., 1967, pp. 45-78), discusses this in detail. In this study, it worked something like the following. As I looked at properties in the total system, the tuberculosis and the psychiatric system, I began to see that people who were identified as mentally ill on the tuberculosis ward were treated differently, depending upon where they were and the type of mental illness. I then began to look for the patients who would give me data on the kinds of things I was worrying about, e.g., I asked the staff to locate two psychotic patients for me, one they considered good and one they considered bad. I also asked for patients with different sequential development of illness and those whose behavior did not fit our conceptualizations in order to maximize discovery. These patients would compose the pilot sample. I observed and interviewed. Other interviewers were also used as a check on my observations.

In the beginning of the field observation considerable time was spent just trying to see patterns of behavior in order to know where to start. These patterns finally emerged through our observations and team discussions. We do review the literature in terms of the problems emerging in the situation at any time when we need additional information.

A major reason why I did not look at tuberculosis in the psychiatric unit is that in this particular hospital setting the psychiatric unit is not set up to care for the communicable aspects of tuberculosis. When a psychiatric patient is found to have tuberculosis he is transferred to the tuberculosis unit. The fate of the patient generally is dependant upon where and when the patient is defined as medically ill and the medical and legal requirements in the different settings. The present study will examine this aspect particularly in terms of the options open to the patients and the workers in the area.

Observations are revealing that some of the outcomes of the patients are being affected by the patient-staff activities based on the properties of the illness. For example, as we look at the "troublesome-nontroublesome" category of mentally ill patients, we note that the most troublesome patients are those with paranoid ideas about tuberculosis, e.g., with delusions that the drug is poisonous or that the tuberculosis staff are part of a conspiracy against the patient. One of the important essentials of tuberculosis management is the regular ingestion of tuberculosis drugs over an extended period of time. Refusal to take the tuberculosis drugs, for whatever reasons, usually makes the tuberculosis staff highly nervous. These paranoid patients are particularly troublesome because they are highly successful in organizing other patients to do likewise. One paranoid schizophrenic patient organized a walk-out of some 12 patients. Some of the paranoid schizophrenic patients may be tractable in the hospital and then when discharged to the home situation, refuse to take their medication, both those for the tuberculosis and those for the mental illness. Once the patient is outside the hospital the same kinds of legal controls used in the hospital cannot be applied. Other kinds of categories emerging are the trouble-nontroublesome alcoholic patients in each of the medical settings.

* * *

SUMMARY
of
GENERAL DISCUSSION

The present research is identifying areas of conflict between two groups, patients and staff, which result in poor patient care. The question arises whether thought is being given to developing suggestions or propositions for resolving the conflict and thus promoting better patient care. The answer is that these ideas are emerging, e.g., having someone with an objective approach work with both groups toward better understanding of each other's problems. Various solutions may be suggested which can be set up and tested in further research.

The problem of observer and interviewer bias was brought forth by questions about the precision of inferences, assumptions, and judgements made by the field worker. For example, who makes the judgement that a patient was considered "worthy" or "unworthy" by the staff. Mrs. Fagerhaugh agreed that the judgement was made by the observer after analysing the data from observations and interviews. She pointed out, however, that the observer realized he had biases and so made every effort to control those biases and be as precise as possible.

The issue of openmindedness and reliability of observations continued to be a major point of contention. It was suggested that the observer could not enter the situation with an open mind and that there was a need to use more precise methodology for the purpose of improving observer reliability. The fact is that the field worker carries with him specific theories which guide the research and structure his perceptions. The point of the field work is to try to apply theory to the experiences and observations. Therefore, the theories must be broad enough to cover the dimensions of the area observed, e.g., in this case theories in the psychological, sociological, and cultural level, and the institutions, policital, economic, etc., which are devised by people.

Theory also operates in regard to the problem of mutual exclusiveness of the categories selected. Theory is a very important control here, otherwise one has only personal bias or opinion to use. A discussion of the utility of field work versus experimental design can have little meaning without an understanding of the philosophy of how the world is organized and its relation to research. Field work can not only add and develop theory but can give us ideas of the important variables in situations that should be studied by experimental designs.

In reply to a question about quantification, Mrs. Fagerhaugh stated that in their analysis of the data accumulated, they do look at the number of times a thing occurred in the various categories--they do quantify the data. The categories are developed in terms of the theoretical framework, i.e., they help to organize the world being observed in terms of the theory. The observations are fitted into categories and thus are immediately quantifiable.

The point was made that the investigators were using a sociological model and that decision about the kind of data to be observed might have been quite different had they used a psychological model. Perhaps both kinds of approaches should be used, although there seemed some question about putting both approaches in the same research effort because of the conflict which might ensue.

Dr. Wandelt's comment about making up the rules as you go along was picked up and the point made that while it was an apt description it was not entirely correct. There are many rules of plausibility of evidence and inference that guide the field worker.

* * *

ON THINKING PATTERNS

Andrea U. Bircher, R.N., Ph.D.

In psychiatric nursing literature the following statements can be found:

> It is manifestly obvious that the nurse represents the cardinal point in the patient's treatment . . . The nurse's principal role in the therapeutic community is as a therapeutic catalyst for the patient, to enhance his healthy integration (1).
>
> Nursing personel is closer to the patient more hours per day than other members of the psychiatric team . . . therefore every action of the nurse may hinder or help the patient (2).

The question then, for every psychiatric nurse, teacher, supervisor, or administrator must be: How can she determine the extent to which her own or another's actions have helped or hindered this healthy integration and resocialization of the patient? Yet, after two and one half years of the investigator's practice in psychiatric nursing, and after two further years of intensive study in general nursing and in the psychiatric specialty, no satisfactory answer was forthcoming.

Significant nurse-patient interactions consist primarily of immediate, moment-to-moment nonverbal interactions (3, 4, 5). In the literature and in the classroom however, the goals of psychiatric nursing and how to achieve them in concrete action situations have been identified and reported upon only in highly general terms. It is said that the nurse, through developing a therapeutic relationship with the patient, gives him emotional support and helps him to meet his needs and thereby to regain his health.

The teaching and learning of such abstract formulations did not provide this investigator with effective guidance and instruction of the nature of the goals of psychiatric nursing nor of the manner in which to achieve them. Therefore the goals and purposes of psychiatric nursing could not effectively guide her nonverbal interactions with patients. Furthermore, comments in the literature suggest that this concern is not an idiosyncratic deficiency of the investigator, but a general condition in the profession (6).

The first step in approaching a study of this type, purposeful and experience-related research, is the exploration of the way in which the problem shows up in personal experience. This involves, potentially, the whole range of human experience. But, a problem, by definition, means that a line of action has been initiated in order to achieve a certain goal, and that something, situation or event - the problem - interferes and prevents the reaching of the desired goal. Therefore, step one narrows the focus of attention considerably by only looking at goal-directed action which is presently inhibited, blocked, interferred with, and prevented from reaching the desired goal.

Step two, involves a look at statements about the goal-directed action, the professional literature. It further limits the focus of attention. It confines the focus to those areas of experience which are talked about, and which are thereby defined as pertinent and important.

The function of step three and step four is to find out if something important was left out, or if a mistake was made in the choice and emphasis of aspects defined as important. The steps accomplish this by looking at assumptions underlying concepts, and by looking at factual and theoretical knowledge related to the concepts or assumptions.

Step five, picking the simplest case which shows clearly all aspects involved, provides a pertinent instance of the general case with which formal research methodology can deal, (i.e. deduction, testing and making inferences from hypotheses.)

It was hoped that the findings of this study might contribute to the field of psychiatric nursing in the following ways:

1. Clarifying and operationalizing of key concepts of the field.

2. Interrelating these concepts.

3. Relating these concepts to the level of effectiveness of intuitive, nonverbal nursing actions.

4. Clarifying and operationalizing the goals and purposes of psychiatric nursing.

5. Clarifying central processes involved in human growth

and development through learning.

6. Interrelating personal experience, verbal formulations, and effectiveness of behavior.

These steps, in turn, may help to develop a cognitive bridge between consiously formulated knowledge and intuitive action. This, in its turn, may result in more effective application of new knowledge in the immediate nurse-patient interactions.

Pschiatric nursing is also concerned with helping the health professions to identify and to alleviate the pathological arrests and aberrations of a person's growth and development. It endeavors to help the team to institute corrective measures and learning experiences for the patient in order to start him on the road towards healthy effective maturity. This is a start whence he can, and hopefully will, use the help of formal and informal adult education in order to realize, through lifelong learning, the goal of adult education: health, maturity, actualization, and continuous evolution of his human potential.

The Study Concern

The central psychiatric nursing concerns of mental health and growth towards more effective maturity for the patients served, and the adult education concern of educated effective maturity for all persons, both involve the interrelations of personal action experience, verbal formulations, and effective behavior. These concerns however, also form the investigator's point of inquiry into the confusion about:

1. What are effective professionally purposeful actions in psychiatric nursing?

2. What are their relationships to personal action experience?

3. What are their relationships to the formulated body of knowledge of the profession and of the culture in general?

4. What are the relationships of personal action-experiences to the formulated body of knowledge of the profession and of the culture?

The study concern of this investigation is the clarification of the interrelationship of personal experience, verbal formulation, and effective purposeful behavior. The main reason for the exploration of these facets and axpects is the locating and defining of a relevant study problem, amenable to research, which involves the interrelations between personal experience, verbal formulations, and effective, purposeful behavior.

Analysis of Subjective Personal Experience in Psychiatric Nursing

The original concern, as stated, was a lack of clarity and understanding about effective professional behavior in psychiatric nursing, its relationship to personal experience and action, and its relationship to the formulated professional body of knowledge.

A second major concern was the dichotomous experience common in nursing -- the feeling of living simultaneously in two separate worlds. One world consists of the analytically elegant and intellectually challenging discussions of classrooms and professional interactions. The other world comprises the practical experiences, verbal and nonverbal.

A third problem noted in psychiatric nursing practice was the repetition and patterning in the nonverbal, intuitive action realm in which the majority of practical nursing experiences occur. Somewhere the nurse does make a difference. But how? When? Where? Why? And in what way?

A look at the literature in psychiatric nursing revealed an enormous, if not overwhelming, array of statements. Each statement explores a different aspect of experience and emphasizes it as crucial to the field. Rarely is one aspect related or supporting to another.

Analysis of the Theoretical Source of the Problem

One important and incisive step in locating the theoretical source of the problem is a clear statement of the concepts involved, and the examination of their underlying assumptions. Such a statement prevents the use of contradictory or negating premises. Thereby it prevents study findings from becoming intractable and paralyzing half-truths; half-truths which, since they are true in part, but in part only, cannot be discarded, nor used as effective guides for action (7, 8).

According to the use of concepts in the psychiatric nursing literature the following ones cited and discussed appear to be of central importance to the profession. These concepts fall into four main groups: those related to the criterion goal, to the achievement process, to intervention or facilitation of the goal achievement, or those related to clinical and pathological considerations.

Criteria for the selection of statements about each concept were: 1) only statements with lower order of abstraction, or 2) nonverbal referents were chosen. This resulted in concepts which would be useful in nonverbal action and interaction as follows:

1. Concepts related to criterion goal
    a. Emotions and feelings
    b. Health, maturity, education
    c. Personality, ego, self
    d. Role, society, culture
    e. Life, need, impulse, awareness, behavior, environment
2. Concepts related to the achievement process

    - a. Growth, learning, problem solving, decision making
- 3. Concepts related to intervention or facilitation of the goal achievement
    - a. Therapy
    - b. Levels of functioning
- 4. Concepts related to clinical and pathological considerations
    - a. Illness, pathology
    - b. Psychoses, neuroses, personality disorders, etc.

Analysis of Relevant Theory and Knowledge from Other Disciplines

The overview of literature and analysis of concepts in psychiatric nursing disclosed, among other things, the profession's concern with a scattered multitude of academic areas: anthropology, biology, business administration, education, human relations, linguistics, medicine, natural sciences, pathology, psychiatry, psychology, sociology, and social welfare. These separate academic disciplines arise in the study of analytically distinguisable aspects, processes, or perspectives of man and of his environment. In life, however, these processes fuse synergistically into an integral whole: the unique person interacting with his environment. It is this whole and unique person which is and must be, the concern of the psychiatric nurse. Therefore, each of these areas of academic concern are a vital and integral part of the field of psychiatric nursing.

Psychiatric nursing, however, is not interested in exhaustive study and knowledge of each or any one of these academic disciplines, even if this were humanly possible. Psychiatric nursing is primarily interested in greater understanding of the natural processes of growth and development from conception through birth, childhood, adolescence and adulthood which culminate in the mature, effective and healthy person, and which eventually lead to senescence and death. The previous analyses pointed out as the central and core problem the interrelation of personal experience, verbal formulations, and effective behavior. The behavioral sciences provide further factual and theoretical knowledge which helps to clarify this interrelationship.

The following six analytically distinguishable interpenetrating processes were found to be relevent to the interrelation of personal experience, verbal formulations, and effective behavior:

1. The action process
2. The communication process
3. The abstracting process
4. The sign process
5. The process of ostensive definition
6. The cooperative interaction process

The analysis of theory and knowledge in other disciplines of relevance to the key concepts and concerns in psychiatric nursing suggested that successful autonomous redirection of action and behavior depends on the effective development and use of words. In order to provide a guide for autonomous action words must be forged from, and must remain grounded, by lower order abstraction, in personal action and nonverbal contact experience. This suggested that clarification of effective professional behavior in psychiatric nursing depends on the resolution of the dichotomy between the personal, nonverbal action experiences, and the highly abstract and contradictory verbal formulations of the profession.

Review of Related Research

The following research findings were selected and cited because of their relevance to the central question of this study: the interrelationship among personal experience, verbal formulations, and effective behavior.

Terman noted that the ability of an individual to function at upper intellectual levels is determined by the number and variety of concepts he has at his command (9). Langer suggests that limits are placed on thought by a person's power of conceptualizing, by the wealth of formulative notions "with which his mind meets the world," and not so much by the extent or wealth of his experiences (10). She further points out that symbolization is not the same as thought. Symbolization is a necessary but not a sufficient condition for thought (11).

Lovell in reporting and discussing some of the Geneva School's experiments, and of his replication thereof, essentially corroborates and elaborates Piaget's and others' findings about concept formation in children. Lovell points out that a concept may be defined as a generalization about related sense data which enable a person to respond to, or to think about a specific stimulus in a particular way (12). Any given concept widens and deepens throughout life. As it does so, it facilitates and increases the degrees of generalization which can be made about the relationships of the data concerned (13).

Lovell further points out that still little is known about the process of concept attainment and about interventions that might encourage or enhance such attainment. He reports, however, that it is associated with a person's ability to differentiate between those aspects of a situation which are essential, and those that are not (14, 15). A person is said to have attained a concept when in a discussion he no longer must refer to descriptive aspects of a specific instance, odd example, or isolated experiences. He has attained the concept when he sees an object or a relationship as an instance of a general class (16, 17).

Thought, the functional use of concepts as a vital contribution in a persons's daily life, arises out of action which he performs on objects and in situation themselves (18, 19, 20, 21). This point is supported by Goldstein's statement: The Schizophrenic patient is forced to build up a language which--though it appears strange to the normal--is adequate to his experiences (22).

Erickson and Kuethe demonstrated that verbal behavior is subject to manipulation by reinforcement (23). They support the view that learning theory is applicable to verbal behavior (24). Carson et al studied Caucasian and Negro children in primary schools (25). They equated groups for age grade placement and verbal comprehension scores. They found that the Caucasian prefer higher levels of verbal communication; show sharp decision in sample classification and few errors or "do not know" responses. Northern Negro children favor vague responses and make more errors than do the Caucasian children. The Southern Negro children have a high score of "do not know" responses. The investigators conclude that "comprehension" and "communication" (use of language) are two different things. Use of a word requires recognition within a certain context in daily life experience, and not just definition of a word in isolation.

Gendlin et al and Lovell point out that concepts are of all degrees, widths and depths (26, 27). Concepts do not develop in all situation, in all media, at the same time. Nor do they develop all at the same age for a given person. Therefore, such concepts are not equally well available to the person in all situation.

Lovell distinguishes three levels in concept function (2, 8):

1. Response level on perceptual basis

2. Response level on conceptual basis (Here mastery of the correct verbal terms is important.)

3. Response level on conceptualization of relationships among individual concepts.

In summary, these research findings point out that effective behavior depends on a person's cognitive power, on his ability to think. A person thinks when he uses the concepts at his command in order to direct his actions towards reaching a desired goal. Concepts useful in such action direction are symbolically represented generalizations from sense data and were abstracted from personal experiences. As such each concept represents a group of experiences and common consequences that can be expected from them. Once a person has developed a concept, he must only identify a specific instance as a member of that exemplar group, of that concept, and he can anticipate future happenings.

Statement of the Research Problem

The foregoing analyses of subjective experience, literature, key concepts, related theory and research identify the six interpenetrating processes (see page 213) as crucial core of this interrelationship. These analyses suggest that functional verbal formulations arise from the interaction of the six processes and from a person's resulting abstraction of the essence of his personal experience. This essence of a given experience is symbolized by a word. And such meaningful words make it possible for a person to direct autonomous action effectively towards a desired goal.

If true, this interrelationship is reflected in the effectiveness of a person's behavior, and his verbalizations provide an indication of his action potential. Therefore, the research prolem of the next stage of the present study was to find a way to demonstrate this interrelationship between experience, verbalization, and effective behavior. In order to do this the consideration of the six interpenetrating processes must be reduced to a problem which is amenable to research methodology. Northrop suggests this be done by studying a simple case which involves all the pertinent factors (29).

The simplest case exhibiting all the factors involved in the development and use of the sign process is seven-month old Jeff. It is Jeff whose behavior--pulling himself up on the living room drapes--is consistently intercepted by mother. It is Jeff who, after establishing this pattern, interrupts himself autonomously when mother is not present to do so. It is Jeff who is learning to heed mother's words and the vocal sound which accompany her interferences.. And it is Jeff who is beginning, all at the same time, to learn to make such vocal sounds and to designate with these sounds his actions and aspects of his surroundings (see figure 1).

Formalized and systematized the factors involved in the simple case of Jeff's hanging from the drapes are as follows:

1. The action process: Jeff is attracted by the drapes follows his ideo-motor tendency. He moves over and grasps them. Life impulse issuing forth.

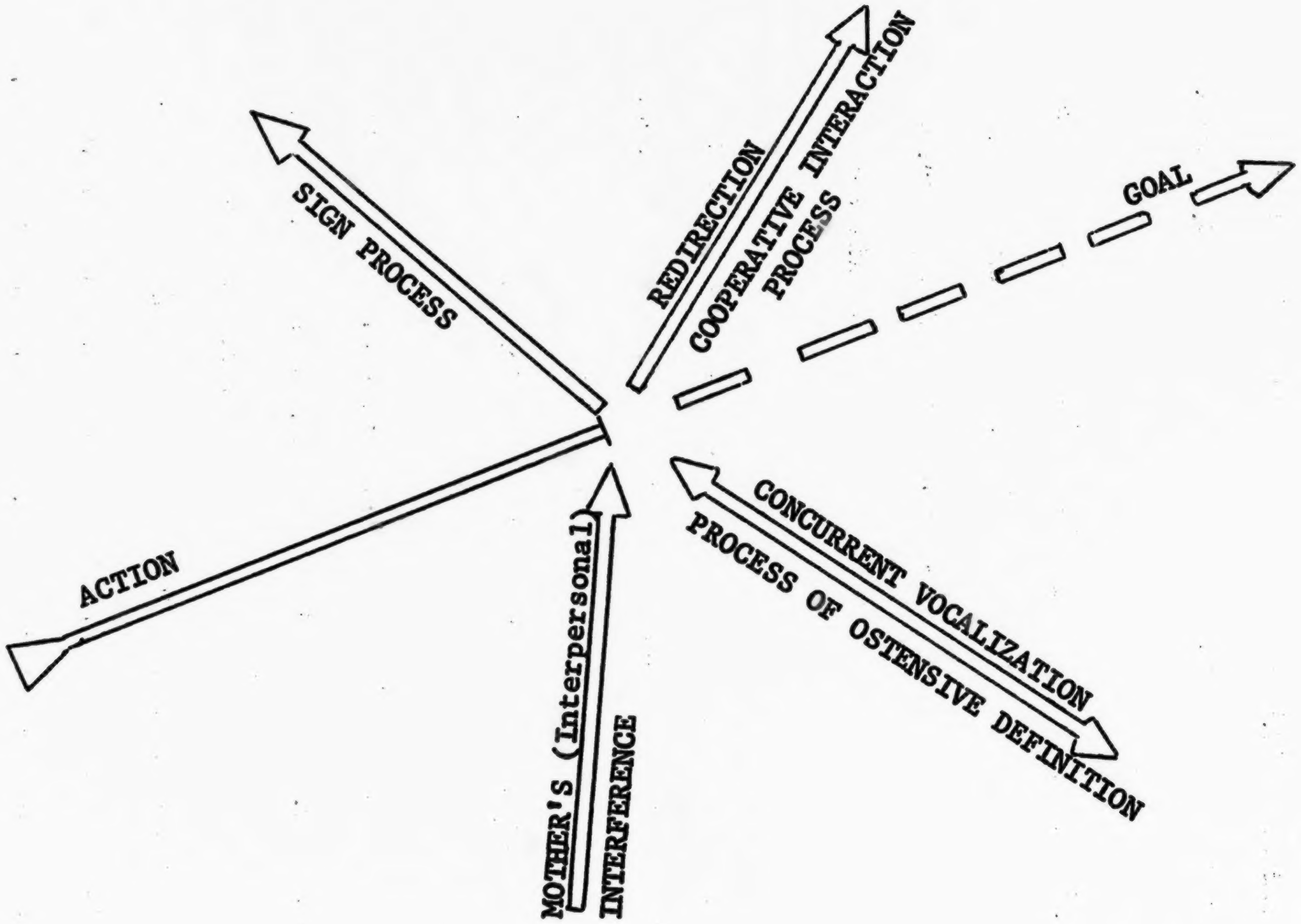
2. Interpersonal interference: Mother's communication is "don't." She acts with intent not to allow Jeff to hang from the drapes. She stops him. She intercepts him. She prevents him from falling, from touching dangerous and taboo things--most of the time.

3. Ostensive definition: Mother talks whie she interacts and goes about her business. She also names objects and persons as she points to them. "Those drapes are no! No!"

4. Criterion goal: The object towards which the original action was directed: the drapes.

5. Redirection: Mother's consistent redirecting of Jeff's actions. She used to move him bodily. At times she still does whenever he gets into something he is not to have. At times however it is just a word: "No!" Mostly, however, she redirects his attention with something like: "Jeff where is your jingle-bell-truck?" And he goes looking for it. He momentarily forgets about the drapes. Sometimes he can follow her directions and becomes absorbed with something else which happened to attract his

Figure 1
SIX PROCESS AREAS


SIGN PROCESS
REDIRECTION
COOPERATIVE INTERACTION
PROCESS
GOAL
ACTION
MOTHER'S (Interpersonal)
INTERFERENCE
CONCURRENT VOCALIZATION
PROCESS OF OSTENSIVE DEFINITION

fascination. His energies, at least, are allowed an outlet: "Not this, but that instead."

6. Sign process: Nonmaterialization of the expected: nonoccurrence, or delayed occurrence, of a part of the expected pattern stops action which activates search for the missing part. By resonance and anticipation it also gives rise to mental images. These mental images eventually become represented by vocal symbols: words.

Basic Assumptions

The following assumptions are accepted as a point of departure for the present study:

First Assumption. In words and their meaning man possesses a representative model of the world and of the experiences he can expect in it. He can acquire words in two basic ways:

1. By discriminating, abstracting, conceptualizing, and symbolically representing aspects of his personal experience; and

2. Once he has acquired a basic stock of such primary symbolized concepts he can short circuit the process by imitating the verbalization of other persons and by relating these to his other symbols.

A person may or may not infuse the associated word with meaning, with the actual experience which gave rise to the primary concept. If he does, the word will function as an effective verbal mediator of his action.

If a person does not infuse words acquired by association with primary conceptual meaning, then no matter how proficiently and appropriately he manipulates them, they remain separate verbalisms. In this case they have no referent in the action world. Therefore they are ineffective in the autonomous control and direction of actions.

Second Assumption. Each person must, in social interaction, develop his own symbolically representative model of the world.

Third Assumption. Word symbols, the content of awareness available for autonomous recall, arise from attention. This, in turn, arises in behavior conflict. Therefore, word symbols are evidence of conflicts to which a person has been exposed, and of the resolution he has achieved.

Fourth Assumption. Therefore, it is to be expected that in an autonomous situation a person verbalizes in accord with his past experiences. If in his learning interactions his attention was directed and focused on the past only, he will tend to speak of segments of the world in terms of the past. If the learning focus was on values such as right and wrong he will continue to focus on values. If his learning focus was on the future goal to be achieved he will tend to continue to focus on the future.

Fifth Assumption. Nevertheless, each word symbol stands for an arbitrarily selected and personally and meaningfully experienced segment of the world. Therefore, it implies a range of possible behaviors and their consequences associated with that part of the world. As such words are arrows. They help to direct and to focus a person's attention on a part of the world. Therefore, they can guide behavior.

Sixth Assumption. All six interpenetrating processes are intricately involved in a person's attainment of object reality, of conceptualization and symbolization of each personally meaningful aspect of the world.

Seventh Assumption. Conceptual focus and emphasis, the area of the world to which symbols call attention, may be any area, or any combination of areas of the six interpenetrating processes.

Eighth Assumption. A person's preferred foci of attention (his perspectives) are analytically distinguishable. They are manifest in his verbal behavior.

Ninth Assumption. Modifications of the statement of the six process areas provide an exhaustive, but open category system into which aspects of the world can be classified.

Tenth Assumption. In any activity or action of an organism, therefore, in verbal behavior of a person, functional proficiency can be demonstrated at ranges and levels other than the ones he uses to structure a free and autonomous situation. These levels of proficiency, however, do not enter self-initiated action. Therefore, they neither enter his vital, nor his crisis activities. For example: a man, to save his life, swims across a river. With this he had demonstrated functional proficiency, he can do it if need be. But, he does not like to swim. He is afraid of water. He avoids it whenever possible. He never voluntarily works or plays in any activity which is based on swimming, such as water polo, diving, underwater exploring, etc. Therefore, all activities which have as prerequisite, or which evolve out of swimming proficiency are beyond his life style.

Eleventh Assumption. In accord with psychoanalytic principles it is assumed that, given necessity, opportunity, or freedom, a person tends to structure a situation in terms of his preferred way of conceptualizing experience (30).

Twelfth Assumption. Nursing and hospital administration, nursing and medical supervision, and the physician's treatment plan (his orders and directives) provide a more or less rigid structure for the patient care situation. However, regardless of how rigid the administrative structure may be, in the immediate translation of the treatment plans into action-experience the nurse is autonomous. She structures and must structure her own approaches and interactions with the patient. She assesses and defines the situation. She mobilizes the necessary resources in terms of her own professional and human judgement. For example: the physician's order for a given patient may include an order to: "restrict the patient to the ward for x number of hours whenever his behavior is socially inappropriate." It is however the nurse who must decide if a particular behavior, at a given time, in a given context--this act, now--is to be defined as "socially inappropriate."

Summary of Assumptions. In words man has a model of that part of the world which, in the past, he has experienced meaningfully. He had to develop this model for himself, in interpersonal interaction. Therefore, the kind of model a person possesses and the way he uses it reflect the kind and extent of mastery of his past experiences. He can use this model to focus his attention and to guide his behavior. The specific focus of attention he uses is an arbitrary selection from among many possible alternatives. He may focus on any subcategory, or on any combination of subcategories of the six interpenetrating processes. Upon command he may demonstrate ability in attention focus and behavior mastery which he does not use in autonomous structuring of free, of stress or of crisis situations.

If the foregoing assumptions are valid then autonomous verbalizations should provide an indication of the autonomous behavior potential of a person. This would also indicate further learning experiences needed or desirable in developing and enlarging this potential, and therefore in his growth towards more effective health and maturity.

Such an indicator of a person's mastery of past experiences, present behavior, future potential, and desirable learning experiences would be most useful for psychiatric nursing becase:

1. The nurse is concerned with assessment of mastery and with the selection and development of needed learning experiences for the patients.

2. The nurse herself must function autonomously in the

structuring of each of her patient care interactions. Therefore, an indication of her potential would help in assessing her affectiveness, and in selecting further learning experiences for her.

Rationale

Given the foregoing assumption, it should be possible to analyze any given specimens of verbal behavior, oral or written, in terms of their foci in the six process area categories. Variations in a person's preference for category areas is indicated in their frequency of use. It indicates some of the behavioral potential which may or may not be expected from this person. For example: a person who rarely uses the future tense, who never mentions future hopes, desires, goals or their achievement, would hardly be expected to have clearly defined and well formulated goals which he plans to achieve. Nor would one expect to see him initiate action towards such goals. One would expect even less to see him persevere in the face of obstacles, or to direct his present activities in accord with the amount of progress made towards achieving such a goal.

Relevant Hypotheses.

I. A person's focus of verbalization occurs with equal frequency in all and any of the six process area categories.

II. Deviations from chance expectation of categorical focus frequencies, if any, are associated with the following variables:

1. Characteristics of the stimulus
2. Characteristics of the stimulus referents

3. Characteristics of the person giving the responses
    a. Age
    b. Foreign language proficiency
    c. Marital status
    d. Level of effective functioning (grade point average)
4. Characteristics of past experience of the respondent
    a. Level of formal education
    b. Level of continuing education
    c. Level of professional experience

Deduction of Consequences.

If the foregoing assumptions, rationale, and hypotheses are true, then:

1. A stratified random sample of single stimulus words provides an unstructured yet standardized stimulus situation which potentially elicts all or any kind of response focus.

2. Essay type responses to such a standardized unstructured stimulus situation can be analyzed qualitatively in terms of their focus frequencies in the aforementioned six process area categories.

3. Statistical analysis of the focus frequencies for each of the six process area categories is possible. It indicates agreement or disagreement among the respondents about the pertinence, import, or concern in each of the six category areas.

4. Results of such quantitative (statistical) analysis may be generalized to the sample space from which the stratified random

sample was drawn. What is true of the sample stimulus words may be considered true of all words which comprise the original sample space.

5. Responses are given by unique persons with unique characteristics. Therefore, such personal characteristics as age, grade-point average, and the like, or characteristics of past experiences to which the person had been exposed, may be related to and may vary with the focus frequencies in each process area category. If the respondents are chosen to constitute a random sample or a larger sample space, then the correlations between focus frequencies and the personal data of the respondents may be generalized to all members of the original respondent sample space.

6. Single stimulus words in an unstructured context requiring short essay type answers elicit a respondent's principal way of conceptualizing and symbolically representing experiences. This is revealed in a respondent's selection of focus frequencies in the six process area categories.

7. Increased mastery of experience of a respondent, and its concommitant increased range and flexibility of behavior, is reflected in his patterns of thought, i.e. in his combination of focus frequencies in the six process area categories.

The Research Design

The purpose of the present stage of the study is the investigation of the function language performs for a person. To what aspects of the world and of experience--concrete or abstract--does language direct attention? What, if any, are the different patterns of language use (use of the sign process)? How, if at all, are these patterns associated with levels of effective functioning? With characteristics of stimulus situations? With characteristics of the objects or aspects of the world to which words direct attention? With characteristics of persons? Or with characteristics of their past experiences?

The primary research aims of the present study were:

1. To establish and demonstrate the viability of analytical categories for functional analysis of language.

2. To identify and define individual units of verbal behavior focus to be classified in each separate category.

3. To determine if there is a relationship among these categories.

4. To determine if there is a relationship among the focus frequencies in any one category and the stimulus situation or personal characteristics and past experiences of the respondents.

The research method used in this study was the ex post-facto design, an after-only measurement. This is a quasi-experimental design which allows for the establishment of categories, the identification and definition of individual units belonging into each category, and the determination of the presence or absence of relationships among these categories. This design does not allow explanation of relationships, because it provides only one of the three necessary conditions for this purpose: concommitant variation. This design lacks the two other conditions necessary for explanation of relationships, namely: temporal asymmetry and ruling out of unknown contributing factors.

The Sample Space and the Sample

The sample space consists of a hypothetical population of all possible responses. The following three necessary conditions, if all present, are sufficient conditions to elicit a random sample of all possible responses:

1. A minimally structured but standardized stimulus situation which allows the respondent maximum freedom in the development of ordered responses, yet encourages him to note, without extensive rational censure, the first thoughts that arise to his awareness.

2. A stratified random sample of stimulus words chosen from the sample space of the entire English language. Stratification controls characteristics of the stimulus word and characteristics of the stimulus referents.

3. A stratified random sample of respondents. Stratification was used to control personal characteristics and past experience

of the respondents.

The first two necessary conditions were met by the development of a paper and pencil test, a thinking-pattern-test-questionaire: the Quest.

The third condition was met by selecting randomly one class from each of the three types of nursing education programs in Northern California.

The Quest was then administered to all students in all nine classes of all participating programs as follows:

Masters degree program	78 students	1 class
Baccalaureate program for registered nurses	23 students	1 class
Basic baccalaureate program	65 students	4 classes
Diploma program	101 students	3 classes
TOTAL	267 students	9 classes

For analysis a random sample of ten Quests was drawn from each of the nine classes, i.e., 90 Quests of 30 words each, or 2700 short paragraph responses to single stimulus words were analyzed.

The results of the statistical analysis may be generalized to the hypothetical sample space of all possible responses, comprising all English language stimulus words as related to the respondent population of nursing students in all of Northern California.

Since 37.8 per cent of the students in the baccalaureate program for registered nurses, and Master's degree program were practicing registered nurses before entering the programs one may suspect that the results also have a certain validity for the entire registered nurse population of Northern California. Personal data for the respondent groups are given in Table 1 (see page 233).

The Experimental Variables

The dependent variables were: The distinct patterns of categorical focus frequencies used by a respondent.

The independent variables were: The abstract-concrete dimension of the stimulus word; The personal-impersonal dimension of the stimulus word - referent

Respondents' characteristics

- level of effective functioning (grade point average)
- age
- marital status
- foreign language proficiency
- extra-curricular activities and interest

Respondents' past experiences

- level of formal education
- level of continuing education
- level of professional experiences

Results

The following pattern of focus preference for Northern California nurses was suggested by the findings (see table 2).

Table 1

Personal Characteristics of the Respondent Groups From the Four Northern California Nursing Programs

Class	Age		Continuing Education		GPA		Clinical Experience		Functional Experience	
	In Years		In Unit Courses		Per Units		In Years		In Years	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Master's Program	33.2	25-43	41	0-360	3.4	3-3.8	6	2-14	4.3	0-8.5
R.N. Baccalaureate	31.5	23-53	7	0-47	3.0	2-3.4	6.6	1-15	7.0	1-15
B.S. Collegiate Seniors	25.3	21-38	1.2	0-8	2.7	2-3.2	0.5	0-3	0.6	0-3
B.S. Juniors	23.6	20-48	1.1	0-11	2.3	2-3+	0.5	0-5	0.5	0-5
B.S. Sophomores	21.4	19-30+	0.3	0-3	2.2	2-2	-	-	-	-
B.S. Freshmen	20.3	18-39	0.1	0-1	2.3	1.5-3	-	-	-	-
R.N. Seniors	21.9	20-23	0.1	0-1	2.3	1.5-3	-	-	-	-
R.N. Juniors	21.3	19-28	-	-	2.2	2-3.4	-	-	-	-
R.N. Freshmen	19.1	18-24	-	-	2.1	1.7-3.9	-	-	-	-

Table 2

Per Cent Categorical Focus Frequencies of Quest Responses For Nine Educational Levels of Student Nurses In Northern California

Categories	Masters Students	R.N. Baccalaureate	Collegiate Baccalaureate Program				R.N. Diploma Program		
			B.S. Seniors	B.S. Juniors	B.S. Sophomores	B.S. Freshmen	R.N. Seniors	R.N. Juniors	R.N. Freshmen
I ACTION PROCESS									
I.1 Subj. Narrat.	2.4 %	3.7 %	3.3 %	1.4 %	1.7 %	2.8 %	2.0 %	0.8 %	4.0 %
I.2 Subj. Impers.	2.2	2.0	2.0	2.3	3.1	2.1	2.2	1.4	2.0
I.3 Life	1.7	0.4	1.4	0.7	1.5	1.1	1.4	1.5	1.3
I.4 Propriocept.7	2.9	2.6	3.6	2.6	2.4	2.1	4.4	3.6	3.3
I.5 Sense percept.	2.4	2.9	2.1	2.8	2.3	2.3	3.4	2.5	1.9
I.6 Motor modality	2.0	1.9	2.1	1.7	2.7	1.9	3.2	2.4	2.5
I.7 Mobilization	-	-	-	-	-	-	-	-	-
II INTER PERSONAL IMPERATIVES									
II.1 Arrest impulse	1.0	1.0	0.8	0.7	0.7	0.5	0.5	0.6	0.8
II.2 Impers. Other	4.3	5.1	3.7	6.7	4.5	3.5	4.0	3.7	2.5
II.3 Others	7.7	10.1	7.4	8.7	7.4	8.6	7.0	8.6	9.2
II.4 Try	0.1	0.3	0.4	0.3	0.6	0.3	0.5	0.6	0.1
II.5 Imperatives	3.6	6.2	4.1	4.9	5.6	4.0	5.0	4.3	3.5
II.6 Contract	0.8	0.7	0.4	0.7	0.4	0.8	0.9	0.7	0.4
II.7 Self Determ.	0.1	0.05	0.04	0.03	0.1	0.06	0.05	0.03	0.07
III OSTENSIVE DEFINITION									
III.1 Interact	2.4	0.8	1.5	1.2	1.4	1.5	2.5	1.7	1.6
III.2 Simult. Conc.	0.03	-	-	0.03	0.35	0.17	0.10	-	0.37
III.3 Vocalization	0.2	0.1	0.1	0.2	0.3	0.1	0.1	-	0.3
III.4 Reprod. Symb.	6.3	5.5	7.0	3.6	5.3	7.7	5.0	6.9	7.1
III.5 Verbalism	2.5	2.1	1.9	2.7	2.2	2.8	2.2	2.2	2.1
III.6 Sign-signif.	0.6	0.8	0.8	0.9	0.5	0.8	0.5	0.4	0.4
III.7 I.P. Use	0.02	-	0.06	-	0.03	0.02	-	0.03	0.02

IV CRITERION GOAL									
IV.1 Future narr.	0.5	0.4	0.4	0.3	0.1	0.4	0.5	0.1	0.5
IV.2 Expectations	0.6	0.4	0.7	0.6	0.1	0.6	0.2	0.4	0.9
IV.3 Goal setting	0.06	0.3	0.3	0.3	0.2	0.2	0.2	0.4	0.2
IV.4 Initiative	0.06	0.05	0.04	0.06	0.1	0.06	0.05	0.1	0.02
IV.5 Perseverance	0.1	-	-	-	-	0.08	-	-	0.1
IV.6 Achievement	0.2	0.3	1.1	0.4	0.8	0.5	0.7	0.9	0.5
IV.7 Synergism	-	-	-	-	-	-	-	-	-
V. REDIRECTION PROBLEM SOLVING									
V.1 Envir. Narr.	30.1	28.7	29.0	31.6	34.1	28.9	36.0	32.8	30.0
V.1a Descrip.	3.1	2.2	5.0	3.7	5.7	3.8	4.0	4.2	4.0
V.1b Structure	1.3	1.6	0.9	1.8	1.0	1.4	2.2	1.7	1.5
V.1c Function	0.1	0.3	0.2	0.03	0.6	0.4	1.2	1.0	0.02
V.1d1 Space-time	8.0	7.9	6.7	6.9	7.0	5.7	8.1	7.5	7.5
V.1d2 System-conn.	0.5	0.7	0.6	0.5	0.5	0.3	0.8	0.5	0.7
V.1e Me-function	1.3	1.2	1.0	1.8	1.2	1.5	0.7	1.2	1.3
V.2 Expl. Alterns	3.8	5.0	4.1	3.3	2.6	4.1	2.0	4.1	2.1
V.3 Assess Alts	1.6	0.6	1.0	0.7	1.0	0.3	1.0	0.6	2.4
V.4 Choice	0.4	0.3	0.9	0.1	0.9	0.4	0.7	0.8	0.4
V.5 Follow through	0.03	0.3	0.06	0.4	0.03	0.06	-	-	0.04
V.6 Society, co-op.	0.9	0.9	0.7	1.0	0.9	0.5	0.6	1.0	0.4
VI. DEVELOPMENT OF SIGN PROCESS									
VI.1 Non-occurr.	3.2	4.0	4.4	2.4	3.6	3.4	2.8	2.7	4.2
VI.2 Gesture	13.3	8.5	11.8	13.6	10.8	13.0	7.7	11.7	12.5
VI.3 Signif. Symb.	0.03	-	0.08	0.03	0.03	0.06	0.05	0.07	-
VI.4 Mind	1.1	1.9	0.8	1.0	0.5	0.9	0.6	0.6	0.8
VI.5 Self	0.5	0.6	0.2	0.3	0.2	0.5	0.4	0.2	0.4
VI.6 Gen. Other	0.06	0.05	0.1	0.06	0.1	0.1	0.1	0.1	0.07
VI.7 Felicity	-	0.05	-	0.03	-	-	0.05	0.03	-

Acceptance of standards and values formulated and imposed by other person; repetition of standards and directives; narrative relating and reporting of the observed; and minimal or complete lack of focus on all active, dynamic, interactive and future concerns, as well as lack of focus on all categories of the more advanced levels of the problem solving and thought processes.

This pattern is consistent with the general character of clinical nursing practice. Here the physician delineates the treatment directives, the "orders." The nurse carries them out. She observes the patient's reactions and reports these in narrative fashion. The nurse may identify the observed as consistent with what is to be expected and proceed on her way. She may note unexpected or problematic reactions and conditions and report them, again in narrative fashion, to the physician. Thereupon she awaits changes in directives, executes them, and reports the new results.

The pattern is also consistent with the general practice of dividing labor, and of assigning nursing staff duties. The nurse in charge makes out and posts the assignments. The nurses carry out these assignments and report on them in objective, narrative fashion. This pattern of approach is also true for nursing education and student assignments.

Another aspect of experiential reality reflected in the pattern is nursing's general nature of meeting patient demand, needs, and requests.

These observations and conclusions receive tangential support in Tjelta's findings at the University of Washington. She reports that:

> Student nurses were "representative of all female students; and that in comparison with the total university population nursing students had higher mean scores on tests for English usuage and spelling, and lower mean scores for mechanical knowledge, mathematical studies, quantitative reasoning, numberical ability and space visulization (31).

In short, entering students in nursing score below the average in subjects requiring active, autonomous manipulation of abstract symbols. They score higher than average in the subjects which require implementation of predetermined standards and directives. This, and the small difference in the overall patterns among the freshman classes and the seniors and master program graduates, suggests that the pattern of obligatory acceptance of other formulated and other imposed values and standards already exists in students before they enter the professional nursing curriculum. However, the pattern seems to be reinforced in particular by the emphasis of the grading system as a success measure and reward system. The grade point average correlates negatively with focus frequencies of setting goals and judging progress towards achieving those goals. High grade point average also goes along with low emphasis on system-connection, i.e., with how things and oneself fit into the larger system of which they are a part. The grading system encourages students to accept the instructor's evaluation of her achievement. This is of course synonymous with acceptance of other-formulated and other-imposed values and directives.

Applying the Friedman test for two-way analysis of variance by rank and the Spearman rank correlation coefficient to numberical entries for the six process areas the major hypothesis was refuted, and so were all the secondary ones. The categorical focus frequencies for the six process areas involved in symbol formation did not vary, as was expected, by chance alone. Instead, as noted, Northern California nursing students demonstrated a distinct and persistent pattern of differential frequency of use.

This pattern of preferred use of categorical focus frequencies by Northern California student nurses was not associated with:

1. The nature of the stimulus word (abstract-concrete dimension)

2. The characteristics of the stimulus referent (personal-impersonal dimension)

3. The characteristics of the stimulus respondent (age, grade point average, etc.)

4. The types of experiences to which the respondents had been exposed (education, continuing education, professional experience)

These results support the theoretical statement that the content of consciousness, at least as it is available for ready recall and use in autonomous, unstructured stress situations such as the Quest, does not depend on the nature of the stimulus, nor on the characteristics of the objects involved. It does depend on the sensitivity of the organism, of the person (32, 33, 34, 35).

Analysis of categorical focus frequencies of Northern California student nurses in terms of their use of the sign process revealed the following distribution:

Table 3

Northern California Nursing Student Thinking Patterns

Thinking Pattern	Per cent of response segments
1. Symbol formation	8
2. Categorical thinking	31
3. Uni-polar thinking	19
4. Bi-polar thinking	28
5. Continuum thinking	8
6. Process thinking	4
7. Dimensional thinking	2
TOTAL	100 %

It can be seen that 86 per cent of the total response segments fall into the first four levels of use of the sign process:

symbol formation, categorical, uni-polar and bi-polar thinking; 8 per cent indicate continuum thinking; 4 per cent reach the level of process thinking; and 2 per cent give evidence of dimensional thinking.

Further analysis of those rank correlation coefficients (8.4%) which indicated a relationship not to be expected by chance variation alone, showed that various aspects of nursing education were associated with an emphasis on uni-polar and bi-polar thinking. However, it should be emphasized that these correlations, though beyond chance expectation, comprise only a very small part of the overall response total: the mode is 0-1 per cent, the median 0.6 per cent and the range .02-10.7 per cent. These results provide too slim a basis for conclusion or inference about differences of nursing education programs or excellence of student groups. However, they provoke thought.

In summary, the results of the foregoing investigation of a verbal behavior sample of Northern California nursing students indicated few or no frequencies in all areas of dynamic action and higher levels of problem solving and thought processes. The results further indicate high frequencies in areas of observational narrative and imposed value standards. This suggests an attitude of passive dependence on directives and re-directives for action.

These finding are particularly significant because they agree with and receive support from Coghill's and from Schneider's studies in genetic neurology. Both confirmed that the total behavior pattern of organisms appears in embryos long before a functioning nervous system exists:

> The nervous system reflects faithfully the somatic and environmental forces of growth potentiation and growth kinesis which it integrated and which indeed it eventually displaced (36).

In other words, forces, energies, and processes of the organism interact with those of the environment. This interaction gives rise to behavior patterns and encourages, directs, and controls the growth and development of these patterns. Given a certain stability and time the nervous system develops in response to these patterns. It integrates them and automates them. Thereupon, the organism can initiate and maintain the behavior pattern without external forces impinging and shaping it. The nervous system then, develops in response to and reflects the organism's reaction to the environmental forces impinging on it.

There appears to be a contradiction between the above statement and the results of the present study. The later indicate that the nature of the stimulus cue, of the object, of the environmental situation or of the learner himself are not related to the symbolic content of his consciousness, his information overload resolving mechanism. However, this contradiction is only apparent. The determining factors in the growth, development, and use of mental powers are not the characteristics of situation, objects, stimuli, persons, or environmental forces impinging on the learner.

The determining factors are, as Schneider points out, the learner's, the organism's reactions to the actually experienced impinging forces and his resulting behavior pattern. These reaction patterns determine and are reflected in the nature of the growth of the nervous system and therefore in the conscious content of symbolic representations and their use. The determining factors, the components of the reaction pattern are as follows:

1. A person's ability to notice, his sensitivity
2. His ability and way of interpreting the meaning of the noted
3. His patterns of impulse expression (action) and reaction to whatever environmental forces impinge on him, or whatever environmental situation confronts him
4. His pattern of information overload resolution, i.e., his patterns of symbolic representations
5. His patterns of thinking, his manner of use of the sign-process in directing his actions.

These determining factors, however, he acquires in interpersonal relations. He acquires them through the actual, non-verbally experienced differential emphasis of interaction, of ostensive definition and their consequences.

Conclusions

The question motivating this study was a concern about the interrelationship of personal experience, verbal formulations (i.e., body of knowledge and statements about the field), and effective professional behavior in psychiatric nursing.

Analysis of behavioral science theory and related research findings suggests that functional verbal formulations arise in and from personal experiences. Such analysis further suggests that symbolic representation of the abstracted essence of personal experience - words - make possible autonomous control and goal directed action, i.e., effective goal directed behavior.

Functional analysis of autonomous verbalizations of Northern California nursing students in all clinical areas demonstrated a pattern of attention focus. This focus pattern mirrors the past and present professional behavior pattern of these nurses. The theoretical formulations and abstract concepts of literature and classroom discussions are not reflected in this pattern.

From the present study and from the previously cited literature there emerge four interpenetrating dimensions of psychiatric nursing. These aspects seem consistent with the intuitively felt repetition and patterning of action experience as well as with the body of knowledge stated in the literature:

1. Ideal conception of psychiatric nursing

2. Real conditions of present practice
3. Life sustaining and medical treatment care
4. Rehabilitating and growth care

Further evidence and support for the validity and usefulness of the theoretical formulations advanced by the present study comes from an empirical body of clinical knowledge and experience: Kalkman's nurse-patient relationship therapy (37). This stresses a need for the nurse therapist's consistently friendly, accepting, and verbally-nonverbally congruent approaches to a patient over a prolonged period of time. The approaches are to be at a level and in a manner acceptable to the patient. It has been found that in the experience of such a consistently accepting relationship the patient can develop new patterns of interpersonal expectations and behavior. He can learn or relearn to relate himself to his impersonal environment and to people(37).

Nurse-patient relationship therapy, as started by Kalkman, provides beyond warmth and acceptance, the following:

1. development of patterns of expectation
2. nonoccurrence of these patterns
3. encouragement of activity and initiative
4. interperonsal redirection of behavior

These provisions, in turn, are all the necessary and sufficient conditions leading to sign-signification, to symbolic representation, and to their concommitant potential for mental growth and development.

Realization of this potential however, depends on the nature and effectiveness of the differential emphasis in action experience. It depends on the ostensive definition, on the concommitant verbal-nonverbal congruence which the patient experiences in this relationship in interpersonal interaction which, by consistent repeated and organized response towards aspects of the environment, gives rise to mental powers.

Therefore, Kalkman's principles of nurse-patient relationship therapy, if applied with purpose and goal orientation, provide the necessary and sufficient conditions to help a patient to learn how to use the sign process more effectively, and by doing so to grow towards healthy maturity.

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FURTHER WORK ON THINKING PATTERNS

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I took literally the suggestion that I might discuss what I have done with my research since I completed it. Therefore, I would like to take this hour this afternoon to tell a little about the kinds of things I have been getting into using some of my findings.

I should begin by stating my bias: I am a nurse practitioner first and I look at research as a tool which is useful. In other words, when it comes to priority, dealing with problems comes first, and using the research tool comes second. This will become more apparent later in this presentation. To summarize my original work very briefly, the impetus to the work was given by a search for the interrelationship between three seemingly isolated aspects: 1. personal experience as a practicing nurse; 2. the formal organized body of knowledge to which I was exposed in school or in the library; and 3. the continuing question and uncertainty about effective nursing action.

The situation of the separation existing between my experience and the formal body of knowledge created an acute personal frustration and discomfort and led me back to school and study. The results of the research study indicated that meaningful knowledge available for autonomous action arises in conceptualization of the personal experience and provides a model of the world and a guide to action.

This result raises a number of new questions. What are effective nursing actions? In other words, what are the goals and purposes of nursing? What knowledge is necessary and sufficient to achieve such effective nursing actions? How is this necessary and sufficient knowledge used most effectively? What knowledge do nurses now possess and what are their skills in using this knowledge?

I would like to report to you some of my experiences with an investigation focused upon the fourth question, What knowledge do nurses have and what are their skills in using this knowledge.

If indeed research is to develop new knowledge; if indeed the practice of the profession involves the use of knowledge for effective actions; if in fact the nurse clinician is the liaison between academic knowledge and a nonverbal action of the nurse practitioner who delivers services; and if indeed relevant knowledge arises out of areas where the problems are; then my problem of teaching a course in research methodology provides a beautiful laboratory for study. It has a sharply circumscribed body of knowledge. Most students are not very proficient with this knowledge when they come to my course and they have to practice and apply that knowledge by coming up with a thesis draft which is acceptable to their committee.

My problem was a scientific one. It was not a consideration about whether I was a good or a bad teacher, nor was it a question as to whether my students were good or bad; the question was: What did I find when I used research methods to look at my experience in teaching research?

I assumed that we all do the best we know how, given as we see the circumstances. Basic assumptions which came out of my thesis, which I accepted for organizing my course work were as follows:

1. Behavior patterns are acquired in interaction with the environment. (You see my interactionist biases.)

2. Behavior patterns, if present over a prolonged period of time, lead to the integration of the central nervous system (including the symbolic content of consciousness).

3. Central nervous system integration provides a guide to an autonomous action.

4. Success in professional practice requires independent problem-solving ability and action.

5. Learning, problem solving, and scientific research are seen as three different perspectives of the same process, the sign process. Therefore, a thesis would provide a fitting demonstration of independent problem-solving ability.

Accepting these assumptions as valid, the course experience for my students was developed and selected as far as I possibly could to illustrate the concepts, rules, and principles and to allow the students to discuss their experiences and to formulate these into some kind of a conceptual framework.

The problem for study, then, was a general exploration of the students strength and weaknesses and their achievement in learning research methodology in the context of this particular research course. The method used was exploratory and no hypotheses were postulated. There are no deduced consequences to give you, because the purpose was primarily to endeavor to identify new variables and possibly to come up in the end with some hypotheses.

The sampling was purposive, namely, an opportunity sample of students who happened to come to the course I happened to be teaching. Therefore, no statistical inference or at least no valid statisitcal inference can be made to the larger group from which this group of students came.

What are the ethical concerns of the research? There is no known risk. The confidentiality is assured. The data are used as group data, not as individual data. However, all the course work that was done, including the participation in class and my observations, became part of the data. The students were informed at the beginning of the first quarter of the course, which goes for five-quarters, that I was planning to evaluate the course by using research methods. Students were free to withdraw from the program. However, the course is required. I leave the judgement as to coercion to you. The students have been exceedingly cooperative, very interested, and in their class they have had a dry run of what you are hearing now. They know that this material is being presented here. There is no known risk, even though you may have some questions about this, I would say that the potential benefits of this study are the increased understanding of the student, knowledge of their strengths and weaknesses and achievements.

Methodology

The students took the Quest at the beginning of the first quarter, and at the end of the fifth quarter of their course. A rating of the student thesis by committee members was obtained. In addition, the students wrote a weekly evaluation of their own learning experiences at the end of each class; all written course work, term papers, and thesis drafts were used; and teacher observations of tutorial interaction, classroom interaction and experience, as well as self evaluations of the students which they use after each class period and at the end of each quarter, were also used. Content analysis, rating scales, observations, and subjective expressions and hunches, were used. Again, it should be emphasized that this was an exploratory investigation trying to find out some of the things that were happening. While analysis of all the data has not been completed some of the preliminary data have been tabulated and are the basis of my discussion.

Results

I will first look at the weekly evaluation of learning experiences by the students. See Table 1. In the first quarter broad and open-ended question was used: What was your most important learning experience this last week? The analysis very simply fell into two categories: 1) the responses that were relevant to the course content, namely, research methodology and the specific items that were discussed in class that day; or 2) areas of personal experiences. You will note that 29 per cent of the comments fell within the course content, while 71 per cent fell outside of this area.

In the second quarter, the question was changed to: What was the most important idea that was discussed in this last class? You will note that this time 63 per cent of the responses fell within the area of the actual course content discussed, and only 36 per cent fell within the area outside.

In the third quarter students were asked to identify strengths and weaknesses in the presentation today. By the third quarter the students were presenting their thesis drafts in seminar. They were concerned with group problem solving and with helping each other struggle with the thesis. In their evaluation 12 per cent of their comments were positive, or discussed the strength of the presentation, and 23 per cent of the comments, relevant to research

Table 1

Students' Weekly Evaluations

Quarter	Structural Thinking Research Course Content		Semantic Thinking		
	Strength +	Weaknesses -	Other content	Personalization	
First Quarter					
Most important learning experience last week	29%		18%	53%	
Second Quarter					
Most important idea discussed	63%		11%	25%	but not available in written course work
Third Quarter					
Identify strengths and weaknesses--Research methodology	12%	23%		65%	
Fourth Quarter					
Identify critical incident in group's research problem-solving (give specific detail)	6%	48%		46%	
Fifth Quarter					
Behavioral outcome rating scales	35%				

methodology were concerned with the weaknesses, lacks, or what was badly done; and 65 per cent were comments that involved group interaction, group process, and/or personal experience or nursing experiences outside of research methodology.

In the fourth quarter students were asked to identify crifitcal incidents relevant to research methodology. Using this approach only six per cent of their comments identified positive strengths, while 48 per cent commented on the lacks and the weaknesses and 46 per cent of the comments fell into areas of discussion which were not relevant to research methodology.

In the fifth quarter, instead of asking open-ended questions, a six-point scale for the purpose of rating achievement on the behavioral outcomes of the course was submitted to the students. Students rated themsevles and each other. The comments and the rating are shown on Table 1. The students rated themselves as achieving 35 per cent of the behavioral outcomes. See Table 2. There may be some question about how this was tabulated. Actually, is was handled as a grade point average is handled, five for A, four for B, et cetera. All of the numbers were then added and translated into per cents.

The general impression, which is partly based on my own hunches, is that students do not recognize an idea when they see one, or a piece of research methodology when it is well done. At least they do not tend to identify it, because there are many instances which they do not pick up. Students tend to focus on

Table 2

Self Evaluation on Course Objectives

Student Name

	Class Mean Grade Points (N = 82)						
Scale or Grade Points	1	2	3	4	5	Total	GPA
A. Problem	3	16	18	100	175	312	3.85
B. Core Problem	3	8	33	112	135	291	3.54
C. 1. Own Experience	2	12	24	76	100	214	2.60
2. Prof. Literature	5	12	36	64	60	177	2.15
3. Related Theory	2	22	42	32	75	173	2.10
4. Related Research	6	12	39	40	40	137	1.54
D. Synthesis	5	8	33	56	40	142	1.73
E. Hypothesis	3	14	33	24	15	89	1.08
F. Deduced Consequences	2	6	24	32	5	69	0.84
G. Assumptions	0	6	18	6	30	90	1.09
H. Test of Consequences	2	0	3	32	45	82	1.00
I. Results	0	0	3	16	15	34	0.41
J. Implications	0	2	6	40	15	63	0.76
						TOTAL	22.69

Class G.P.A. = 1.75

A = 5
B = 4
C = 3
D = 2
E = 1

the lack of something or on what is not well done. Students have difficulty in differentiating focus on research method or research purpose and focus on group purpose, and I believe if you look back over the last few days somewhat critically you will find we ourselves were intermixing discussions on nursing, the general problem area, and research methodology without any very sharp distinction.

In fact, I do not feel that our experience in the last three days has been very different from what I experience in the seminars with my students. Students tend to drift into narrative report if they are challenged on a situation on methodology. They tend to say this is what I did.

Possible Interpretations, Conclusions and Implications of the Findings

Students did achieve and demonstrate such achievement, but did not recognize this when they rated their own performance. On the other hand, it is possible to interpret it the other way around; students did not achieve and they did rate each other accurately. I do not know which it is. This requires further study.

These findings suggest the possibility of Simon's notion operating. He suggests that there is such a thing as semantic thinking; this means new information tends to be translated into old frames of references and new ideas become unavailable to us.[1] To quote one of my students: "Oh, these abstract words, why can't you say it simply. I don't even bother to pay attention to these words."

Another student said, "Now that you explained this in tutorial, I understand. If only I had know it before." Of course she had heard it at least three times before, it had been presented in class two times and had come up a few weeks before in seminar. But it was not meaningful to her until she could see how it was relevant to her specific problem at a time when she was stuck and her old way did not work.

This thinking is congurent with the educational principle that learning is only as meaningful and useful as the student sees how his present work task helps him to achieve those goals to which he himself is committed.

I would like to turn now to the written course work and what I found when I looked at it. This consists of the thesis proposal drafts for the second and third quarters, their first rough proposal and the reworking of it. The results are shown in Figure 1. Please note the sudden or precipitous dip in the center of the graph, in both of the graph lines. You will notice on the left side are listed the different aspects of the proposal outlines as required of the students and that the dip in the

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[1] Personal communication with Dr. Simon, Carnegie Institute of Technology, Winter 1967.

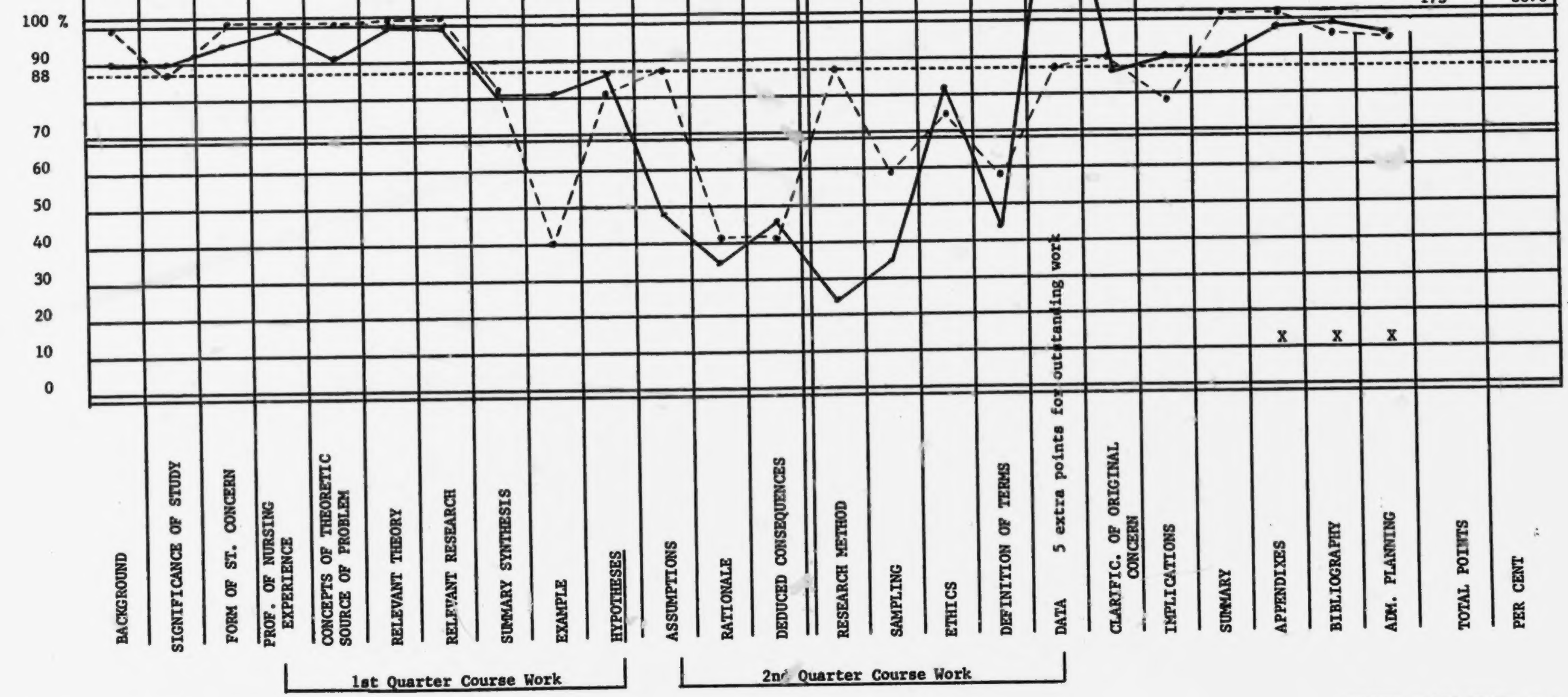
5

Figure 1. Evaluation of Thesis Work

Research in Nursing - Nursing 493 Section II
Class Average on Proposal * (N 21-6=15) March 17, 1968 —— Winter 1967
** (N 18-3=15) June 14, 1967 - - - Spring 1967

TERM PAPER

	I. Problem Def.			II. Analysis of Initial Concern					III. Statement of Problem					IV. R. Design					V. Conclusions			Appendix	Bibliography	Adm. Time-Table	Total	%
	a	b	c	a	b	c	d	e	a	b	c	d	e	a	b	c	d	e	a	b	c	--	--	--	--	--
Total Points Possible	5	10	10	10	10	10	5	10	10	5	5	5	5	10	10	10	10	10	10	15	5	5	10	5	200	100%
$\bar{x}$	4.6	9	9.5	9.9	9.2	10	5	8	8	4.3	3.3	1.8	2.3	2.2	4	8.1	4.9	14.6	8.3	13.7	4.7	4.9	10	4.8	162.26	81.1
																									173	86.6



WINTER CLASS GRADE B +
SPRING CLASS GRADE A -

* Six incompletes not included here
** The incompletes not included & 3 drop outs

outline in the graph falls in the second quarter's work. All of the areas involved in the second quarter "dip" require deductive logical thinking flowing from the statement of the core problem. The hypothesis is made that our students in this sample have great difficulty in terms of logical deductive thinking. And I would like to hypothesize that this is true of all of us in nursing discussions.

The first quarter was taught by experiential exercises. In class discussion the teacher stressed the critical attributes of concepts and the teacher gave a summary synthesis of the essential points. The second quarter was taught partly by student didactic presentations and partly by the teachers.

I would like to point out it was in the second quarter when the students were asked to respond to the course content as to the most important idea discussed, 63 per cent of the responses fell within the area relevant to the course, and it seemed that we were doing very well in the second quarter. However, that material was not really available for their autonomous use. During the third and the fourth quarter I taught a large group in seminar and students were presenting. In the fifth quarter the students initiated a restructuring of the seminars into smaller groups, so that they would feel a little more comfortable and more ready and able to move on and get their thesis done. They did not care much about presenting to a large group and learning about their reactions. The question arises, is it also true of other areas in nursing that some or all of the class time is wasted?

Tutorial and Teacher Observation

With each student individually I had a psychological confrontation which included elements of threat, of failure, and involved the necessity of pointing out how the use of the research methodology course would help her to get her to solve her problem. Only after this confrontation did the student begin to move purposively, autonomously, and with a willingness to do whatever was necessary and required by her problem to meet basic research requirements. Also at this time she began to be able to use faculty resources constructively rather than to come and fight and argue on some issue. Unfortunately this is only beginning to happen. At the beginning I thought this was peculiar to just a few of the students. It is not. They all do it. I confess to being a new teacher. I never taught before last year. My conclusion, now is that the educational notion that when one provides the student with an opportunity to move she will go ahead and move constructively is a fairy tale. I would like to suggest that teaching must get the student to work to the limit of her capacity. This is admittedly difficult to do, but it is only really good learning for her if she takes a step beyond where she is. It is when one tries for that step beyond that sparks start to fly.

This kind of experience supports the view of graduate education and indicates that there is a need for individualized tutorial to achieve the goal of maturity and mental growth and development. It indicates also that is is necessary for the students to have a clear conceptualization of their objective and of the relationship of their present task to the achievement of this objective to which they are committed.

I would like to share with you what students do well. They choose exceedingly significant frontier problems, crucial to patient care. Students are exceedingly proficient and not afraid to cope with the problems in the field or in the data-collecting phase. They work hard and diligently and spare no efforts. They have a high tolerance for the muddle and chaos which precedes inductive generalization. They are able to select eclectically significant items from the literature which are relevant to their problem area. They readily move into new areas and, with help, develop new methodologies. They are enthusiastic about results and successes achieved. By the second year they have developed a remarkable maturity. They are no longer the sweet obstreperous youngsters that came to us, but they are self-confident and able young women.

However, students are anxious and find it difficult to work on a project over a prolonged period of time, e.g., five quarters. They have great difficulty in planning ahead. We have many incompletes. They botch up their entries into the field if we let them. They have difficulty planning their statistics ahead and they give us the most weird administrative timetables when we first ask for information. In discussions students indicate they are not used to contributing to ongoing endeavors. What does this do to patient care? If they snitch an interview (or a bath or an injection) and deal with it as a separate experience, how does this contribute to the patient's ongoing experience?

Students will choose topics but as soon as they encounter their first difficulties, they tend to want to change to something else. Students tend to avoid commitment to opinion, at least it is difficult for them to find a rational basis or a basis in fact. They have minimal use of rational thought links. For examples, in one discussion I watched for the basic thought links they used, the and's, or's, no's, if's, then's, therefore's, and but's; 12 students problem solving for a half an hour used a total of 12 thought links, one each on the average. I tried a control group of the people on staff in the office of research and medical education in a comparable period of time and they used 199, or an average of 22. I did the same yesterday afternoon with this group. Those of you who spoke up used 162 thought links, or an average of 16. I leave it to you to interpret these data.

The idea of thought links, however, continues to bother me, because I pick it up elsewhere. In the first draft of the thesis I received what I can only call a recitative regurgitation of literature oftentimes consisting of quotations. In a second draft I received a statement of banal generalities, imperatives, and value judgements. The third draft brought out some curious awkwardnesses and odd errors in the use of thought links, and three or four sentences were at times used when one sentence was needed. You might like to dismiss this kind of thing as poor exposition. However, one wonders if it really is poor exposition, since some of the students do not otherwise make these errors in English.

In summary, students work hard and diligently and produce excellent theses projects, many of them as yet unfinished. However, in the research course they did not obtain crucial concepts to the extent necessary in order to be able to use related knowledge for effective guidance for their autonomous behavior; namely, the writing of their thesis.

The Thesis Committees seemed to provide a stop gap for the individual learning which did not occur in the course. Our faculty (three members on one committee) have spent as much as 150 hours to help one student read her paper, correct it, re-read the draft, try to find some questions that sent the student home to continue work on this thesis until it was an acceptable thesis. We feel they are good theses, but it took 150 hours of faculty time to get there. The question is, is this lack of concept attainment true in other areas of nursing? Or is this an idiosyncratic experiences. What I would now like to try is to indicate that maybe this is true elsewhere. The following student quotation was a assigned task very early in the quarter for the purpose of experiencing and conceptualizing steps in a problem-solving research process:

> I guess because I have been away things struck me more forcefully when I got back. I am so aware of the two different standards there (at work). First there is "the right way" or "the way I've been taught or shown" and then there's "the way we do it". Such as one nurse says: once linen is taken from the closet we never put it back, even if it has not been used. A little while later there she is putting back linen.
>
> One of the aides says as I watch: you should wash the pitchers with soap but they just have water in them so I'm just going to rinse them off today.
>
> As one nurse put it: you have to learn where to cut corners. They teach us so many things that have to be done this way, but on the wards no body ever does them that way, if at all.
>
> The other thing that really hit me was in report, with each patient the nurse would say: he's really a nice man, she is so sweet, etc. I get tired of hearing how they feel about patients, especially since they tell me "watch out for so and so" and he turns out to be really not that way at all.
>
> Strange world!

We spent 30 hours in two seminar groups discussing this problem until we came to some kind of a solution. We identified the problem generally as involving dichotomies, model versus data. However, as we continued our discussion we found five apparent dichotomies:

1. The real versus the ideal
2. Done versus the taught
3. The nonverbal versus the verbal
4. The immediate goal versus the long-range goal
5. Specific examples versus general principles.

We had people in nursing service as well as people in education in the discussions and the debate was quite heated at the time.

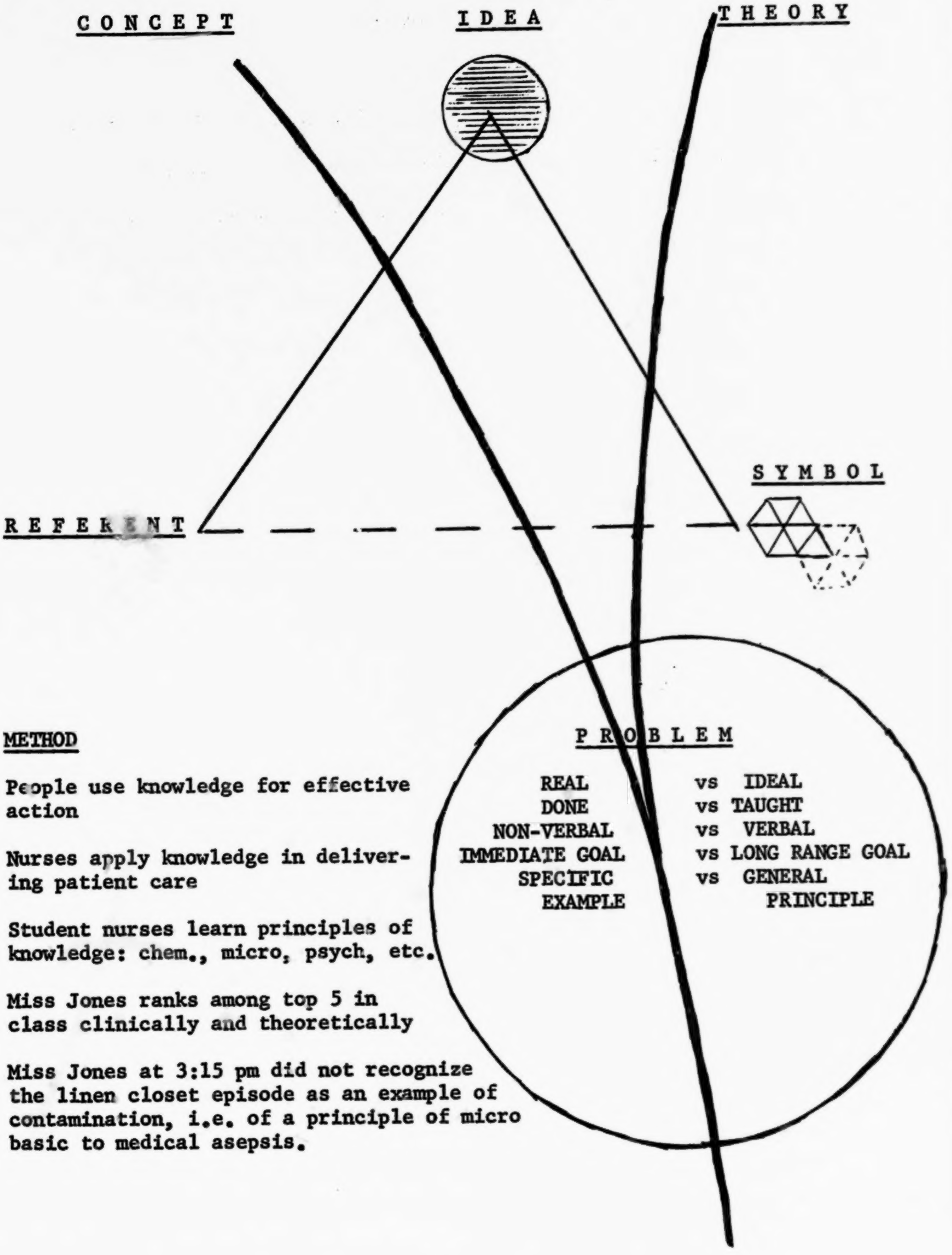
As a result of discussion and a look at theory relevant to the problem, an illustration of concept formation evolved. (See Figure 2.) You will note that the concept of relevant theory is represented as a triangle and this would be the concept of contamination in the problem cited in the example. A dotted line is placed between the referent and the symbol. It indicates the concept is a tripartite relationship and that the nonverbal referent and the symbol are not directly connected, but they connect through a certain idea one has.

Some people think of concepts only as the highly abstract words and some consider that concept attainment involves simply the idea and the referent and leaves the discussion of the symbol out. Others use the idea and the symbol and do not talk about the referent.

It occurred to us at the time that something curious was happening in our discussion of the dichtomies. It seemed that all the things we attributed to nursing education involved the ideal, the taught, the general principle and the long-range goal, and all the nasty things we attributed at times to nursing services were the real, the done, the nonverbal, the immediate, and the special example. It occurred to me that perhaps something is not occurring in the nurses' heads. Miss Jones did not recognize the linen closet episode as an example of contamination. That is one specific example of a principle of microbiology which is relevant to medical asepsis. Students in seminar, including some of the instructors involved, suggested that perhaps it was the student's intrapsychic problems or her stupidity. Unfortunately, she turns out to be a student who ranks among the top five in her class in one of the outstanding schools of the country. Therefore, we cannot ascribe this to her stupidity.

Our group continued to talk and we found that our abstraction levels were still far apart. The statement was made that it is nice to have all that theory, but what can we do with it? Nurses work with a specific example, with the student who does not recognize the problem or that certain kinds of knowledge are relevant. We struggled a while longer and concluded that the students did learn principles of the knowledge of microbiology, so that was not the particular problem here. Finally, we decided that we had a beautiful example of the abstraction ladder, which is so important in research methodology; namely, we had the very general statement and we could hypothesize that people use knowledge for effective action, but we still had to test the hypotheses on the very specific example.

Are we willing to take the risk of the inference and leap from each one of these levels to the next one? Are we able to say we know what is going on in a certain situation and can we begin to worry whether this should be researched and how to go about testing it? Do we know enough about using experimental



METHOD

People use knowledge for effective action

Nurses apply knowledge in delivering patient care

Student nurses learn principles of knowledge: chem., micro, psych, etc.

Miss Jones ranks among top 5 in class clinically and theoretically

Miss Jones at 3:15 pm did not recognize the linen closet episode as an example of contamination, i.e. of a principle of micro basic to medical asepsis.

PROBLEM

REAL	vs	IDEAL
DONE	vs	TAUGHT
NON-VERBAL	vs	VERBAL
IMMEDIATE GOAL	vs	LONG RANGE GOAL
SPECIFIC EXAMPLE	vs	GENERAL PRINCIPLE

or survey approaches, or should we still continue to search with exploratory and descriptive kinds of work? Is our problem in nursing really a lack of time, or is it a lack of concept attainment and logical thinking?

* * *

CRITIQUE

of

ON THINKING PATTERNS

Jeanne S. Berthold, R.N., Ph.D.

Dr. Bircher and I do not approach research design problems from the same school of thought. On the third page of her paper, however, she very specifically outlined for us the acceptable rules for developing and judging this type of study. I have tried, therefore, to select the areas for comment that I thought were most crucial according to my limited understanding of this type of approach in addition to being crucial for more traditional approaches.

First of all, let me say that I think that the major strength of Dr. Bircher's study on thinking patterns is its potential contribution as a theoretical model for categorizing individual response patterns. It is admittedly a beginning attempt, but it is also a new way of looking at thinking.

Once a decision is made to focus on process variables, it becomes necessary for me to specify the "rather than" portion of the decision. Two areas immediately come to mind. Dr. Bircher decided to investigate process rather than content and/or process rather than end product. Now, there is at present very little scientific evidence to support the hypothesis that process variables are more general across situations and individuals; whereas, content and end products are linked more specifically with each field of endeavor and each specific situation. It does seem to be, however, a logical operating premise. Accepting this premise allows us to utilize and/or adapt research methods from other fields and to accept their results as potentially relevant to nursing.

It is generally accepted that central to higher level processing of perceiving, knowing, thinking, learning, and problem solving is the concomitant development of a conceptual framework for structuring, classifying, and coding information. This framework is used to hierarchically order and transform information from which new information is generated.

The psychological study of conceptual thinking has had a long and stormy and not very productive history. As late as 1949, Hebb wrote that "the central problem with which we must find a way to deal is the problem of thought--some sort of process that is not fully controlled by environmental stimulation and yet cooperates fully with that stimulation (1)."

The general model I will use to guide my discussion is a modification of the fairly traditional stimulus-organism-response model, and I use this in the generic sense rather than in the sense of behaviorism. I modify the model personally to include the differential consequences of the individual making response one as versus response two. In my opinion the differential consequences need to be explicitly stated and dealt with. If it does not make any difference in the real world whether an individual gives response one versus response two, then the knowledge that an individual gives in a specific response does not allow us to predict anything meaningful about the individual's behavior and the question, "so what," is left unanswered.

In relation to inputs or external stimulus factors, it is assumed that these are not photographic representations of the physical world. In other words, it is not humanly possible to be equally aware of all aspects of any complex situation, be it a person, situation, or object. Consequently, what is perceived is selected and this selectivity is dependent upon a host of personal and situational determinants, some of which are lasting and general, some of which are specific and momentary.

The stimulus model which Dr. Bircher finally accepted involved a two-by-three word matrix of concrete or abstract, by person, manmade or natural, plus 13 words denoting feeling. No definitions were given which were sufficient for me to classify the actual words in this matrix. In other words, I do not know whether "heel" referred to concrete-person, or concrete-manmade, whether "sin," "role," and "society" were classified as abstract-person or abstract-manmade. It was not clear why the matrix was developed in the first place, therefore, I am unable to judge whether it makes any real difference if the stimulus words can be classified in more than one way. On the other hand, I would propose that Dr. Bircher needs to analyze her data in terms of the stimulus words in order to decide whether or not the words potentially allowed for responses across all of her categories.

In looking at the stimulus words, I was not so sure that if you had obtained complex associations of the "higher level thinking pattern type" to, for example, gasoline, sugar, heel, or stone, that you might not have had to raise the question of whether the person was reality oriented or not. I wondered whether one of the standardized projective techniques such as the TAT would not have offered more leeway for complex associations to arise.

In relation to the organismic variables, eight were listed as independent variables. They were: 1) level of effective functioning (grade point average); 2) age; 3) marital status; 4) foreign language proficiency; 5) extra curricular activities and interests; 6) level of formal education; 7) level of continuing education; and 8) level of professional experiences. I could find an analysis of only four of these: grade point average, formal education, continuing education, and professional experience.

As I indicated in my opening remarks, we are badly in need of useful and usable response classification schema. Dr. Bircher did obtain what I consider remarkably high reliabilities given such a complex classification schema even if it was on a limited set of protocols; namely, three. Thus we can conclude for the moment at least that it is usable. On the other hand, I am not very confident about the useful aspect because of the data and I would like to come back to this problem a little later.

I became confused about the relationship between the first classification of the six interpenetrating processes and the second one. Was the second one intended only as a further explication of the original six processes, or was it judged to be an improved system? I had some difficulty trying to judge how and why "communication process, abstracting process, and cooperative interaction" from the first schema were dropped as independent categories and presumably incorporated into other categories. I would like to know, for example, in what ways, if at all, the incorporation altered the scope of the other original categories of "action process," "ostensive definition," and "sign process." The investigator's decision to include arguments supporting both systems presented me with the dilemma of trying to figure out why both were included and in what way they were similar and in what way they were different. I must confess I was unable to understand the decision and I would like Dr. Bircher to clarify the situation for me.

The situation became even more complex when in the data analysis Dr. Bircher switched to another system based upon 12 categories of levels of mental development. Was combining the two systems into a 12 x 6 matrix seen as a profitable approach, and if so, in what way would this be seen as clarifying the current problems in studying thinking processes? If it does not clarify these problems, can the two systems be seen as answering different questions or does one subsume the other?

Insofar as the coding structures were concerned, these were very clearly stated. I did not understand, however, the rationale for focusing upon "change," when the interest was in frequency or proportion of total responses in any given category. For example, Guilford has an instrument which purports to measure divergent thinking, if it is scored for changes in associations. If one scores the same instrument for absolute number of associations, one comes out with a very different score for many individuals. In addition, I could not discover whether the analysis of the data was based upon the proportion of each subject's total responses which were classified into the different categories or whether response frequencies were allowed to vary across subjects.

In essence, I think Dr. Bircher undertook what I judge to be an extremely difficult, if not impossible task, if one wants definitive data. First, it was almost impossible because of the breadth of theoretical constructs chosen to be considered. The stimulus model was originally a two-by-three matrix reduced to a two-by-two (concrete-abstract, personal-impersonal). There were eight organismic variables. The response variables included 12 to 15 developmental categories and 6 to 47 structural categories (six main interpenetrating categories, and all the subcategories). Second, statisticians have not, as yet, been very productive in providing us with the appropriate tools for analyzing the type of data obtained. One cannot assume independence of responses over the series of responses given by an individual. The way the subject originally starts his essay influences how he continues; partly because of grammatical requirements, partly because of habit formation. In addition, one has to assume that the response he gave to the first stimulus influences to some unknown degree and in unknown ways his response to the second stimulus, and so forth. Furthermore, when any of us are put in a position of calculating 318 correlations, no one is very sure how to interpret the results. Finally, I would propose the results obtained may be, at least partially, a function of the stimulus words, and potentially confounded by the self-selection process of "decision to enter nursing."

The current tool does not discriminate across education and potentially not across age. At least two possible alternative conclusions are possible. One, the sample did not differ in focus frequencies; or, two, the tool was inadequate to demonstrate existing differences. My own bias would be to stress the second alternative before accepting the first. As I indicated in my discussion of the stimulus variable, I think it would be very difficult for subjects to focus on dynamic active areas, aspects concerned with the future, and higher stages of problem solving and thought processes with many of the stimulus words. A relatively easy way to determine whether this bias has any merit would be to obtain a group who were judged to function predominantly or successfully in the referant area and another group who were judged not to so function, and see if the groups respond in the predicted directions and differentially.

The self-selection variable could be investigated even more easily by collecting data on a group of nonnurses to see if you obtain differences in responses. I am not sure, however, which prediction I would make. The current data indicates that first-year freshman students responded to the tool in a manner similar to the graduates. The discussion and supporting evidence from subjective experiences in clinical nursing practice are based upon a longer period of professional indoctrination than one would suppose a freshman student had.

In conclusion, any judgement about the usefulness of the theoretical model will have to be suspended until further data are available. At the moment it must remain an exciting and potentially profitable approach.

* * *

REFERENCES

1. Hebb, Donald O. The Organization of Behavior. New York, John Wiley and Sons, 1949.

2. Guilford, J.P. Personality. New York, McGraw-Hill Book Co. 1959.

FURTHER REMARKS

Andrea U. Bircher, R.N., Ph.D.

I agree with Dr. Berthold's criticisms. As she stated, we approached this from two different points of view. Also, I had never had the intention of proposing this model as a final one. I selected the six interpenetrating processes, not because they were there and provided a handy classification system, but because they came out of my experience and the literature. As I indicated, I was using Northrop's suggestion that one could analyse a problem by searching one's personal experience and the pertinent literature. Out of the literature I picked concepts that I judged to be relevant to the problem I was studying. These concepts led on into certain areas of theory, and these in turn provided the six processes. The major purpose of the study was to develop a system of categorization and I agree that the instrument I have is still relatively crude.

* * *

SUMMARY

of

GENERAL DISCUSSION

A general suggestion was made that researchers working with content analysis might get together with persons working with psycho-linguistics and information theory. An exchange with scientists in these areas might prove to be mutually rewarding.

A question was raised as to the definition of the "thought link" and its relation to creativity. Dr. Bircher described thought links as thoughts or ideas that hang together, for example the thought process moves logically from the first idea to the second idea and may lead to a third in dealing with a problem. In response to a query about her statement that nurses do not use thought link processes, she stated that in her exploration of the use of thought links, her students compared unfavorably with a group of people in the Office of Research and Medical Education. This was admittedly a limited sample and leads only to an hypothesis, not to a generalization.

It was pointed out that beginning students in research may be pretty much alike, regardless of the discipline in which they are studying. In other words, Dr. Bircher's students may simply have been following a pattern of behavior followed by all students at this level. Further study would be needed to demonstrate this hypothesis.

* * *

SUMMARY AND EVALUATION OF CONFERENCE

Martha Pitel, R.N., Ph.D.

The fourth Nursing Research Conference focused on nursing research based primarily on the behavioral sciences. The six studies reported represent a constellation of research interests ranging from relinquishment of the sick role in the child to patterns of coping with illness in the family of the aging. Furthermore, a variety of methods were utilized in the collection of the data, such as observer interviews, structured interviews, participant observer, and fact finding from primary record sources, et cetera. Sample size and randomization varied from eight subjects in one study to a population over 100 in another study. Research design and statistical analyses were as varied as the methodologies.

As a whole the conference seemed to operate on a level of psuedo-intellectualism, although there was extreme freedom of expression. The participants seemed to maintain the discussion within the realm of pecking, rather than scientific inquiry. We did not come to grips with issues implicit in the research presented. Theories and conceptualizations appropriate to nursing were not only lacking, but almost consciously avoided by us.

The quality of the research projects was difficult to assess adequately, since complete data were not available in some instances. In other instances questionable methodologies and inadequate measurements were used to test hypotheses. Thus, inevitable spurious interpretations and global inferences were implicit in such a precarious situation.

The strength of the conference can be summarized as follows:

1. Stimulating and interesting researchable problems were presented which focused upon nursing and patient care. I think this is a very important aspect of this conference.

2. In a few instances researchable problems were based on a theoretical base.

3. Hypotheses, when included, were succinctly stated and well formulated.

4. Generally speaking the investigators presented their findings knowledgeably and met the critical challenges thoughtfully.

5. The critiques were well presented and in general followed sequential scientific criteria.

6. The investigators demonstrated that researchable problems in nursing could be found and explored at all age levels of the life span.

7. The investigators dealt with a vast number of complex variables impinging upon human interaction processes. Understandably the beginning researcher acquires sophistication with seasoning.

8. A wide variety of methodological approaches were employed in the research presented.

9. Creativity was evident with subsequent developing potential for the future and movement toward the formulation of nursing science.

The weaknesses of the conference are as follows:

1. The majority of the papers presented were doctoral dissertations in various stages of completion.

2. The theories employed in the studies were often derived from another basic science and were not completely understood, nor internalized by the investigator.

3. The hypotheses stated in the research were not always tested in a logical sequence in the course of the investigation.

4. Sample size was often too small for valid statistical analysis.

5. The complex dependent variables were not taken into account in a sound analytical manner in many instances and the independent variable was often poorly controlled.

6 Indices of measurement used lacked standardization and there was little attempt to test reliability and validity.

7. Objectivity in some instances became contaminated with bias, and unrecognized assumptions.

8. Operational terms were often void of definition or ill-defined.

9. Interpretation of data was lacking in most instances due

to insufficient data and/or incomplete conceptualization.

A conference of this nature raises more questions than it purports to answer. The following are by no means all of the questions that could be raised, they are only a few that were hurriedly put down. Is a developmental event, such as childbearing or child caring in the first infant, necessarily a crisis? Does one use defense mechanisms in coping? How does one normally resolve a crisis situation? What is the base line of ego-function in the coping mechanism? What is the definition of wellness? Are there levels of wellness? Does the investigator in historical research have greater license than other researchers? If so, why should he? Does knowledge of the past allow for prediction of the future? Are we playing a numbers game in public health nursing visits? How does the content of the public health nursing visit influence the course of the illness and/or the wellness of the individual? How does perception of others hinder or enhance dialogue? Are all nurses lacking in logical deductive reasoning? How does one measure change in behavior? What is the theoretical concept which relates the physical illness to the aberrant behavior?

There is need for considerable rigorous research in nursing. We are now on the threshold and our ultimate goal in research is to seek truth.

* * *

APPENDIX A

PROGRAM

NURSING RESEARCH PROGRAM

Held at the
Holiday Inn
New York, New York
March 4-6, 1968

Monday, March 4

PRESIDING:	Elmina M. Price, R.N., Ed.D. Member, ANA Committee on Research and Studies Nurse-researcher, St. Luke's Hospital, St. Paul, Minnesota
8:30 a.m.	Registration
9:00 a.m.	Conference Opening: Lt. Col. Phyllis J. Verhonick, A.N.C., R.N., Ed.D. Chairman, ANA Committee on Research and Studies Director, Nursing Activities Walter Reed Army Institute of Research
9:10 a.m.	Greetings: Jo Eleanor Elliott, R.N., M.A. President, American Nurses' Association Director, Nursing Programs, Western Interstate Commission for Higher Education
9:15 a.m.	Research Project: Becoming Well - A Study of Role Change Betty Jo Hadley, R.N., Ph.D. Associate Professor of Nursing and Lecturer in Sociology, School of Nursing, University of Colorado Medical Center
10:00 a.m.	Coffee

10:30 a.m.	Critique of the Research June S. Rothberg, R.N., Ph.D. Assistant Professor and Director Graduate Programs in Rehabilitation Nursing Division of Nurse Education, New York University
11:00 a.m.	General Discussion
12:00 noon	Lunch
2:00 p.m.	Research Project: A Comparison of Crises: Mothers' Early Experiences with Normal and Abnormal First-born Infants Alice M. Hosack, R.N., M.Sc. Associate Professor of Nursing Department of Nursing, Simmons College
3:00 p.m.	Coffee
3:30 p.m.	Critique of the Research Lillian Runnerstrom, R.N., C.N.M., Ph.D. Assistant Professor and Director, Nurse-Midwifery Program, Department of Obstetrics and Gynecology, School of Medicine, Johns Hopkins University
4:00 p.m.	General Discussion
5:00 p.m.	Dutch Treat Cocktails

Tuesday, March 5

PRESIDING:	Jeanne C. Quint, R.N., M.S. Member, ANA Committee on Research and Studies Assistant Research Sociologist, School of Nursing University of California Medical Center - San Francisco
9:00 a.m.	Opening Remarks
9:15 a.m.	Research Project: The Care of the Mentally Ill in America, 1604-1812 in the Thirteen Original Colonies Dora E. Blackmon, R.N., Ph.D. Professor of Nursing, School of Nursing Medical College of Virginia
10:00 a.m.	Coffee

10:30 a.m.	Critique of the Research Teresa E. Christy, R.N., Ed.D. Lecturer, Division of Nursing Education Teachers College, Columbia University
11:00 a.m.	General Discussion
12:00 noon	Lunch
2:00 p.m.	Research Project: Patterns of Coping with Illness in the Family of the Aging and Chronically Ill and Public Health Nursing Practice Mary Adams, R.N., Ph.D. Associate Professor Frances Payne Bolton School of Nursing Case Western Reserve University
3:00 p.m.	Coffee
3:30 p.m.	Critique of the Research Virginia E. Stone, R.N., Ph.D. Professor and Director Department of Graduate Studies School of Nursing, Duke University Medical Center
4:00 p.m.	General Discussion
5:00 p.m.	Mutual Concerns Forums

Wednesday, March 6

PRESIDING:	Martha E. Rogers, R.N., Sc.D. Member, ANA Committee on Research and Studies Professor and Head, Division of Nurse Education New York University
9:00 a.m.	Opening Remarks
9:15 a.m.	Research Project: Problems in the Management of Tuberculosis Patients Who Suffer Mental Illness Shizuko Y. Fagerhaugh, R.N., M.A. Postgraduate Research Nurse, School of Nursing University of California Medical Center, San Francisco

10:00 a.m.	Coffee
10:30 a.m.	Critique of the Research Mabel A. Wandelt, R.N., Ph.D. Professor of Nursing College of Nursing, Wayne State University
11:00 a.m.	General Discussion
12:00 noon	Lunch
2:00 p.m.	Research Project: On Thinking Patterns: An Application of Research Method Andrea U. Bircher, R.N., Ph.D. Assistant Professor of Nursing College of Nursing, University of Illinois
3:00 p.m.	Coffee
3:30 p.m.	Critique of the Research Jeanne S. Berthold, R.N., Ph.D. Vice-Chairman, ANA Committee on Research and Studies Professor of Nursing Frances Payne Bolton School of Nursing Case Western Reserve University
4:00 p.m.	General Discussion
4:30 p.m.	Summary and Evaluation of Conference Martha Pitel, R.N., Ph.D. Member, ANA Committee on Research and Studies Chairman, Department of Nursing Education School of Medicine, University of Kansas Medical Center
4:45 p.m.	Conference Closure Lt. Col. Phyllis J. Verhonick, A.N.C., R.N., Ed.D. Chairman, ANA Committee on Research and Studies

APPENDIX B-1

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APPENDIX B-2

NURSING RESEARCH CONFERENCE

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APPENDIX B-3

NURSING RESEARCH CONFERENCE

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APPENDIX B-4

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